

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **2.1 The Information of Cake**

According to Subagjo in Ririewa (2009), Cake is batter baked which is made from such as flour, sugar, salt, shortening, milk, eggs, and aroma essential. While Rosyadi (2013) mentions cake is baked batter or steamed batter made from flour, sugar, salt, leavening agents, fat, milk, eggs, and flavor. Therefore the writer concludes that cake is baked batter or steamed batter made from flour, sugar, salt, shortening, milk, eggs, and essential aroma or flavor.

Lekker (2011) states that the basic ingredients for making of cake divided into 2 types. The first type is making composition of cake: flour, eggs, and milk. The second type is making cake being soft: sugar, fat, and baking powder. Lekker (2011) and Rosyadi (2013) says there are the function of the ingredients:

##### **1. Flour**

Cake is usually made from wheat flour. Flour with protein content of 7% - 9% and has been bleached well is perfect for cake. Flour bleaching can accept the sugar, water, and fat or shortening easily. The other function of flour are to build the framework of cake, to bind the other ingredients, and to get a good cake texture.

##### **2. Sugar**

The function of sugar are to give sweetness, to give color of cake, to make cake being soft, to moisten the cake, and to make the batter is not stiff. The use of powdered sugar is not only to make composition of cake, but also to have the soft cake. Unfortunately, if the percentage of sugar is too high in dough, the result will be not good enough.

### 3. Eggs

The eggs will make a cavity in cake. They also gives fluids, aroma, taste, add nutritional value, and gives color of the cake. Eggs can also moisten the cake. Before using eggs, it should be mixed first until nice and stiff. Lecithin in egg yolk can emulsify a batter, while lutein can give color. If the lack of eggs portion, it should be fulfilled with egg yolk. Then if the excess eggs portion, it should be fulfilled with a reduction in egg whites. The steps make more delicious cake.

### 4. Milk

If the milk powder is used, the composition of cake can be perfect. Milk lactose produces crust color, and functions as a good fluid retaining material. While the liquid milk gives a good taste of cake.

### 5. Salt

Salt is able to create the flavor or aroma and can lower the temperature in batter. Salt also has an important role to make color of the crust of cake.

### 6. Shortening

Shortening that is usually used for making cake are butter, margarine, or oil. White butter can not be used as one of cake ingredientsince, it does not contain water like margarine. If it is used, the cake will be less moist. If using a white butter, it should use white butter that has emulsifier. Emulsifier can bind water so that there is no evaporation. The other functions of fat shortening are to keep the cake for durability, to add nutritional value, to give a flavor in cake and to make the cake feels soft. Since it helps retain fluid in cake.

According to Diah (2013) there are 3 types of cake, they are:

#### 1. Sponge Cake

The basic ingredients are eggs, sugar, flour, and melted margarine. The procedures are: whip eggs and sugar until fluffy after that put a wheat flour into the batter, and then add a liquid margarine. Sponge cake type does not need a liquid margarine as much as a Butter cake type need. The types of sponge cake are various, started from using a little of eggs that is called Bolu Cake, and

using more eggs that are called Tart Cake. The use of eggs portion gives an effect in texture and softness of this cake.

## 2. Butter Cake

The ingredients of Butter cake are same like sponge cake, but the procedure of making butter cake is different. The steps are: whip butter or margarine and sugar first, then add the eggs one by one and a half of flour. Sugar that use for butter cake is powdered sugar. Next add the rest of flour and a liquid mixture ingredient such as milk or coconut milk. The eggs are added with a little flour when whipping, it will make a cake being a homogeneous and blended. The eggs will be hard to mix because there is a margarine / butter that whipped first, and add bit of flour the batter can be blended. When whipping, it should be not too long so that the flour is not elastic like bread and there is not much crumb. The texture of buttercake is solid but soft.

## 3. Chiffon Cake

The ingredients of Chiffon Cake are also same like Sponge Cake and Butter Cake, but Chiffon Cake does not use margarine, Chiffon Cake uses vegetable oil. The white eggs and egg yolks are separated. An egg yolk mixed with other ingredients, while the whites eggs is whipped with a little sugar. Then both ingredients of batter are combined. The texture of this cake is very soft and light.

While Ririewa (2009) has a same description about kind of cakes, but she adds one more that is a Genoise Cake.

## 4. Genoise Cake

Genoise Cake is classic European cake style. The ingredients that used in making of Genoise Cake are a beaten of egg yolk, eggs, and sugar. All ingredients are mixed until light and fluffy. This kind of cake does not use leavening agent like Sponge cake type uses melted butter. In making of genoise cake the total liquids (eggs and milk) should be heavier than the weight of sugar, and wheat flour weight should be less than the weight of the eggs. The texture of genoise cake is soft, it has little crumb, and greatly expands.

From explanation above the writer conclude that there are 4 kind of cakes, they are sponge cake, butter cake, chiffon cake, and genoise cake.

## **2.2 The Information of Texture, Taste, and Aroma of Cake**

According to Krama (2013), each type of cake has a different texture, aroma, and flavor. It depends on the ingredients, the processing, and the level of maturity. Texture, aroma, and flavor of cake give an effect to the quality of the cake which ultimately and it cause the effects of consumer acceptance of the cake. Some kind of cake texture are: soft, chewy, wet, and watery. While some kind of aroma are: weak, average, and strong. Then some kind of flavor are: salty, sweet, and spicy. Meanwhile Busyro (2013), says that flavor in cake is chemical reaction by combination of ingredients and creating something new flavors felt by tongue. Then aroma is the result of cake processing. Each ingredient has a different aroma and process. Furthermore, methods of making cake will also determine the outcome of the scent that smell. Texture or appearance of cake is the end result of cake, including the colour of look, the color of display in, the softness of cake, the form-on surface of cake, the condition of cake (dry, wet, moist). Therefore, there are different taste, flavor, texture, and appearance for different type of cakes.

## **2.3 The Information of Lava Cake**

According to Isna (2014), lava cake has a special characteristic that is when cake is cut there is a melting chocolate flowing out from inside, so this cake has a half-baked and it is not cooked perfectly. According to Ronny (2013), Lava cake is a cake that has the sensation feeling during cutting the cake and see melt hot chocolate seeping out like lava of the volcano erupted. While Wikipedia (2014) states that lava cake is a popular dessert that combines the elements of a flourless chocolate cake (sometimes called a chocolate decadence cake) and a soufflé. Some other names used are Chocolate Fondant and Chocolate Moelleux. Therefore, a Lava Cake is a dessert that combines the elements of a flourless chocolate cake and a soufflé. When cutting the cake there is chocolate flowing out from inside like lava of the volcano erupted.

According to Wikipedia (2014) states that the history of Lava Cake is from The United States-based on chef Jean-Georges Vongerichten who claimed to have invention of Lava Cake in New York City in 1987. According to Vongerichten (1987, he pulled a chocolate sponge cake from the oven before it was done and found that the center was still runny, but was warm and had both a good taste and a good texture. Regardless of who invented the dish, Vongerichten has been credited with popularizing it in the United States.

According to Isna (2014) and Andina (2014), There are two ways to make a Lava Cake, they are by steaming and by baking. Lava Cake only needs a few basic ingredients such as dark chocolate compound (dark chocolate compound is a kind of chocolate bar that has a good taste and can used as a basic ingredient for cake), butter, sugar, eggs, flour, cocoa powder or powdered sugar as a topping. However, according to Wikipedia (2014) states that Lava Cake is always baked in ramekin (a small glazed ceramic or glass bowl used for cooking) dishes and has four main ingredients: butter, eggs, sugar, and chocolate. The butter and chocolate are melted together, while the eggs are either whisked with the sugar to form a thick paste, producing a denser finished product; or are separated so the egg whites can be whipped into an egg foam to provide more lift (and thus a lighter cake) when the mixture is baked.

## **2.4 The Information of Chocolate**

Chocolate is the most popular kind of flavor in the world. According to Syakur (2012), chocolate is a food made from the seeds of tropical plant called cocoa (cacao Teobroma). While Azka (2012) mentions chocolate is a food system with a discontinuous phase in the form of cocoa fat but sometimes can also be mixed with other types of fat and a discontinuous phase in the form of solids which consists of sugar, cocoa and milk.

According to Azka (2012), composition of nutrient content in chocolate is very much. Cocoa beans has alkanoid that makes feel bitter. Cocoa bean also has 9% of protein, 14% of carbohydrate, and 31% of fat. 9% of protein in cocoa bean has phenylalanine, tyrosine, tryptophan amino acid in large quantities.

According to Syakur (2012) and Endah (2011), there are types of chocolate such as:

1. Couverture

Couverture is the best kind of chocolate. This kind is pure chocolate with high cocoa fat percentage. Couverture is a type of chocolate which is melting in the mouth fast. It also has a sense of "fruity" and a little bitter. Generally, couverture chocolate has cocoa mass, cocoa butter, and less sugar for bitter taste, and for the sweetness it depends on the balance between the amount of real chocolate with sugar. This chocolate is typically used for the making of hand-made chocolate products. Before it is used, this chocolate should be melted first

2. Plain Chocolate

Plain chocolate is good for cookies and cakes. The percentage of cocoa mass between 30% - 70%. If the concentration of cocoa mass is high, the taste is bitter.

3. Milk Chocolate

Milk chocolate is a mixture of sugar, cocoa butter, liquid chocolate, milk and vanilla. This chocolate is the most consumed. Cocoa mass is quite low at only 20% and it's taste is sweeter than plain chocolate. This chocolate is very favorite among children because it can be directly eaten with a sweet taste and soft texture because it contains milk. This chocolate is not a good choice for making cake. Since, the content of chocolate mass is relatively little bit, milk chocolate is burned easily when melted.

4. White Chocolate

White chocolate is a mixture of sugar, cocoa butter, milk, and vanilla. It has not high cocoa mass, cocoa flavor is the result from cocoa fat. Besides, it can directly be consumption, white chocolate is also used for decoration. Because it is burned easily, it should be cooked carefully.

From the explanation above it can be concluded that there are 4 kinds of chocolate: couverture, plain chocolate, milk chocolate, and white chocolate.

While other products that produced from chocolate such as chocolate powder, chocolate liquid, and chocolate paste which can be used as ingredient for making cakes, breads, crackers, and another snacks.

## **2.5 The Information of Coffee**

Coffee is a very familiar drink among people old, young, women, men, rich and poor ones. According to Fariz (2014), coffee is a kind of beverage made from the processing and extracting of coffee plant seeds. This drink can be served cold or hot. According to Wikipedia (2015), coffee is a brewed drink with a distinct aroma and flavor, prepared from roasted coffee beans, which are the seeds found inside "berries" of the coffee plant.

According to Nugraha (2014), some active chemicals in coffee are caffeine, monoamine oxidase inhibitors  $\beta$ -karbolin, and harmane. These substances play a role in psycho-activity (substances or materials which, when entered into the human body affects the body, especially the central nervous system, can changes mental-emotional and behavioral). Caffeine is an antagonist substance of adenosine known to have stimulant effect. Caffeine also metabolize in the liver and converted into metabolites that paraxanthine, theobromine and theophylline. Meanwhile Edy (2011) mentions that components which is found on coffee beans are caffeine, kaffeol, trigonelline, amino acid, carbohydrate, aliphatic acid, chlorogenic acid, fat, minerals, volatile components, and carbonyl components. Caffeine in coffee is a stimulant of the central nervous system that can improve the performance of the brain because a lot of areas and structures in brain that act in learning and memorizing.

Fariz (2014) and Nugraha (2014) state there are types of coffee:

### **1. Arabica Coffee**

The characteristics of taste in Arabica coffee beans are bitter, high acidity, and the size is smaller than robusta coffee beans. Level of caffeine is 50% less than Robusta. Arabica coffee is a type of traditional coffee with the best taste. This coffee is grown in tropical or subtropical countries. The arabica coffee beans is

small enough and the colour is green to dark red. Arabica coffee has a “rich” taste than Robusta Coffee and the price is more expensive.

## 2. Liberica coffee

Liberica coffee is a kind of coffee that comes from the State of Liberia in western Africa. characteristics of liberica coffee beans are almost similar to the type of like Arabica coffee. Size of Liberica coffee leaves, branches, flowers, fruit and trees are larger than Arabica and Robusta coffee.

## 3. Robusta coffee

Robusta coffee beans or commonly called class 2 of coffee bean because the scope of Robusta coffee growing area is larger than arabica coffee that should be grown at a specific height. The taste characteristics of Coffee Beans Robusta are less acid even the sour taste may not exist at all and caffeine levels are much higher. It also has a sweet aroma, feels mild or soft. Robusta coffee was first found in Congo in 1898. This coffee is stronger against pests and diseases, it makes the price of robusta coffee bean is much cheaper than Arabica coffee.

## 4. Excelsa coffee

Excelsa coffee taste and aroma is very strong and bitter. The coffee beans size is larger than arabica or robusta coffee bean and it is fruiting throughout the year. Excelsa coffee is less well known, because it is very rare to cultivate.

## 5. White coffee

White coffee is made from roasted coffee beans, the process is not until done and should have a special grinder to grind, so the beans have lighter color and aroma of the coffee beans is different than others. White coffee beans are also harder than roasted coffee beans. White coffee has higher caffeine than regular coffee.

From the explanation above the writer concludes that there are 4 kind of coffee: Arabica coffee, Liberica coffee, Robusta coffee, Excelsa cofee, and White coffee.