

CHAPTER II

LITERATURE REVIEW

2.1. Pumpkin

The public would no longer lay with pumpkin. Snacks which have a very sweet taste are often made in the form of variety of dishes, such as compote, or pudding. For mothers with babies, making milk porridge with mixed pumpkin is the right choice and favored by babies. Not only delicious, it turns out the efficacy of pumpkin for the health of the body is also diverse. Yellow squash plant itself comes from Ambon. There are five species of pumpkin it is known today, with diverse forms. Efficacy pumpkin is due to nutrient content and nutritional enough. Among its contents are carotenoids or beta-carotene, vitamin A and C, fats and carbohydrates. Because of the content of this addition, the efficacy of pumpkin as an antioxidant is put a lot of people (Anonym, 2013).

The efficacy of pumpkin for health is affected by many factors, in addition to its natural content. Storing and cooking techniques also need to be considered. A cup of cooked pumpkin supposedly contains 50 calories and fiber content of about 3 grams. Because it is rich in fiber, the efficacy of pumpkin is also able to keep the gastrointestinal system. The reason is the one that is used by mothers who have babies, giving to her baby pumpkin porridge. Baby's digestive system is not perfect yet to process food into the gastrointestinal tract (Anonym, 2013).

Efficacy pumpkin to the gastrointestinal tract is also supported by the content of pectin in it. Pectin serves to protect the gastric mucosa and also stimulate coarse meal. When there is interference ulcer, it will assist in the improvement of pectin. Efficacy pumpkin can also be used to help cure stomach pain, impaired bile secretion and increase gastric peristalsis (Anonym, 2013).

1.1. 1.Nutritions of Pumpkin

Pumpkin contains many good nutrients for health. As the following:

Table 1
Nutritional values per 100 g fresh pumpkin

Contents	Nutritional Value	Total % RDA
Macronutrients		
Energy	26 Kcal	1
Carbohydrates	6,5 g	5
Protein	1 g	2
Fat total	0,1 g	0,5
Cholestrole	0 mg	0
Dietary fiber	0,5 g	2
Vitamin		
Folat	16 mcg	4
Niasin	0,6 mg	4
Pantothenic acid	0,298 mg	6
Pyridoxine	0,061 mg	5
Riboflavin	0,11 mg	8,5
Thiamin	0,05mg	4
Vitamin A	7384 IU	246
Vitamin C	9,0 mg	15
Vitamin E	1,06 mg	7
Vitamin K	1,1 mcg	1
Electrolit		
Sodium	1 mg	0,5
Potassium	340 mg	7
Mineral		
Calcium	21 mg	2
Copper	0,127 mg	14

Iron	0,8 mg	10
Magnesium	12 mg	3
Mangan	0,125 mg	0,5
Phosphor	44 mg	5
Selenium	0,32 mcg	<0,5
Zinc	0,3 mg	3
Phytonutrients		
Carotene- α	515 mcg	-
Carotene- β	3100 mcg	-
Crypto-xanthin- β	2145 mcg	-
Lutein-zeaxanthin	1500 mcg	-

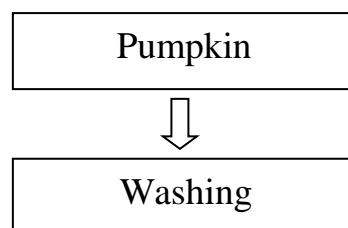
Source: USDA National Nutrient Database (Anonym, 2013)

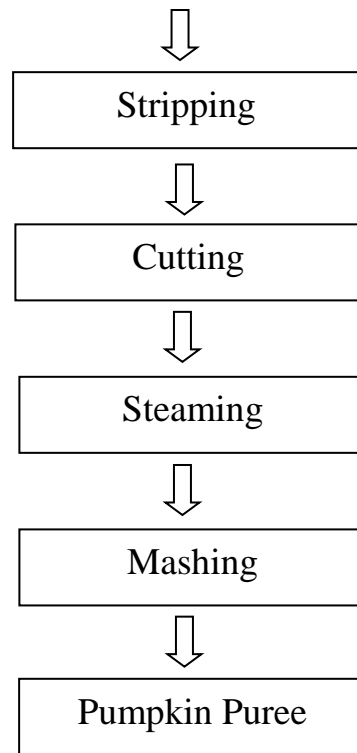
2.1.2. Pumpkin Puree

Puree is processed product of the destruction of foodstuffs. Pumpkin puree obtained from the destruction processor pureeing steamed formerly. The first step in making pumpkin puree is washing, stripping, cutting, and steaming. The second step is by mashing or smoothing pumpkin. Washing pumpkin should be done prior before stripping and cutting processes. If it is forced to be washed after stripping, it should not be too long washing or soaking with running water. This avoids the lack of nutrition value of pumpkin mainly vitamin C (Widayati and Damayanti, 2007).

Chart 1.

Steps to making pumpkin puree





Source: Widayati and Damayanti (2007)

2.2. Muffin

Muffins are derived from the French word *moufflet* which is applied to bread and means soft. English muffin are flat with nooks and crannies that are crooked, English muffin date back to the 10th and 11th centuries in Wales. They were cooked in muffin rings and placed directly on stoves or bottom of skillets. American muffins belong to the group of quick breads and are made in individual moulds. The moulds are necessary since muffin mixture is a batter not dough. Originally the muffin used potash that produced carbon dioxide gas in batter as the leavening agent. On 18th century muffin recipes are discovered in print and by 19th century they had become a tea time favorite. Three states in the U.S. have adopted specific muffins as their official muffins. The blueberry muffin is the official muffin of Minnesota, corn muffin is official muffin of Massachusetts and apple muffin is the official muffin of New York (Anonym, 2010).

Muffins can be English muffins or American muffins. English muffins are a type of bread leavened with yeast and baked in a flat sided disc shaped tin. Muffins are split in two, toasted, buttered and served hot. They can be toasted in front of an open fire or eaten cold with a hot drink like coffee or tea. Muffins made from cornmeal are corn muffins. They are shaped like corn bread but are sweeter. Muffins are made in a variety of flavors and categorized on the basis of specific ingredients like blueberries, chocolate chips, cucumbers, pumpkin, cinnamon, raspberry, date, nut, lemon, orange, banana, peach, almond, carrot, strawberry, and boysenberry (Anonym, 2010).

Muffins have more or less all ingredients used in cakes but the proportion is different. There is more flour, more liquid, less sugar and fat in muffin batter. Most cakes need two or more eggs while muffins use only one. Baking powder is used for batter rise but yeast is never used in muffins. Extra ingredients in the form berries etc are added. Thus the muffin is heavier (nutrition wise) than a cake (Anonym, 2010).

2.2.1. The Quality of Muffin

Glencoe (2010) stated that muffin tops should be golden brown, and the walls, or sides of the muffin, should not be too thick. Muffins should be tender and moist. The crumb should break apart without crumbling. Look for these characteristic:

- Appearance Muffins should be round in shape with dome-shaped tops. They should be uniform in size.
- Color Muffins should have a golden brown surface.
- Texture The grain should be even. The muffin should be tender and moist, not dry or brittle. Muffins should not be filled with tunnels.

- Flavor The flavor should be sweet and pleasant with no bitter aftertaste from too much leavening. An aftertaste is a secondary flavor that comes after the main flavor has subsided.

2.2.2. Baked

Baking is a way of preparing food by the process of conduction, generally in a closed oven. The term baking means the use of heat in an oven to convert flour, water, yeast, sugar and such, into baked goods. In the process of baking, starch content in the food is processed usually decreased that provides the food a brown color which gives it an attractive and appetizing look (Gabon, 2014). The key to proper baking really comes down to the proper ratio between the oven temperature and the baking time which can be determined by the size or weight of the dish. In brief, the item which is the larger and more dense will take longer to cook, and the smaller and less dense will take the less time (Adams, 2015).

2.2.3. Steamed

According to Danilo Alfaro (2015) steaming is a moist-heat cooking technique that employs hot steam to conduct the heat to the food item. Once water is heated past the 212 degrees Fahrenheit, it stops being water and turns into steam. Steaming allows to reach a higher temperature with liquids by steaming them. It is defined by the steam released once water reaches past 100 degrees Celsius or 212 degrees Fahrenheit. Food is in contact only with the steam produces from the boiling liquid. Steaming is common method due to its fast cooking times, high heat and moist-heat cooking nature.

2.3. The Characteristic of Muffin

According to Glencoe (2010) the original procedures to get good muffins are when dry and liquid ingredients can be mixed ahead of time. Once they are combined, it will need to bake immediately and otherwise muffin could lose the volume. Follow these steps:

1. Set the conventional oven temperature at 385 degrees Fahrenheit to 400 degrees Fahrenheit or 196 degrees Celsius to 204 degrees Celsius and grease the muffin pan with commercial pan grease
2. Using a portion scoop, lift the batter from the mixing bowl and drop or pour it into the prepared muffin pan. A portion scoop will provide equal-size muffins. Be careful not to mix the batter when scooping it out.
3. Garnish the muffin batter with sugar, cinnamon, nuts or streusel toppings. A streusel topping is a sweet crumbly topping for cakes and quick breads generally made of flour, brown sugar and granulated sugar.
4. Place the muffin pans in the oven. Bake the muffins for the time listed on the formula. Test the muffins for doneness by pressing on the top of one of the muffins. If it springs back, it is done. If it does not spring back, it needs to bake longer. If you need to leave the muffins in to bake longer, stay close by and watch them carefully to make sure they do not overcook. The tops also should be a golden brown color.
5. Remove the muffin pans from the oven and let the pans cool on wire racks until the muffins are warm.
6. Turn the muffins out of the pan onto the cooling rack. If muffins stick, tap the bottom of the pan to loosen them.

2.3.1. Pumpkin Muffin Recipe

The writer adapted a pumpkin muffin recipe from a food blogger's blog which is mentioned ingredients that used 400 grams of pumpkin puree, 7 tablespoons of granulated sugar, 250 grams of medium wheat protein, $\frac{1}{2}$ teaspoon of salt, 40 grams of cheddar cheese, 100 cc of vegetable oil, and one egg. Then procedures to make pumpkin muffin batter are:

1. Combine the wet ingredients: pumpkin puree, vegetable oil, and eggs. Mix them well and set aside;
2. Mix the dry ingredients: flour (preferably sifted), sugar, salt, and cheese. Stir them well;
3. Pour the dry ingredients into the container that containing the wet ingredients, stirring until well blended to taste, do not need to be stirred for too long;
4. Preheat the oven to a temperature of 180 degrees Celsius;
5. Fill in the batter into paper muffin cup; and next
6. Bake the batter for 30 minutes (Puspita, 2014).

