CHAPTER II
PRODUCT DESCRIPTION

2.1.PRODUCT DESCRIPTION

“Pumffle” is a innovative substation of waffles that is made from pumpkin flour as the main ingredient. Pumpkin flour has good potential as a companion to wheat flour in various processed food products so processed products added with pumpkin flour have an attractive taste and color (Kamsiati 2010).

The pumffle product used pumpkin flour and mocaf flour as a companion because I want to create gluten-free waffles. The waffle has a brownish-orange color and a chewy texture and is also served with maple syrup inside the box. The pumffle is packaged in a snack box affixed with a product label description, composition, and information on how to reheat waffles.

2.2.MATERIALS

2.2.1 Pumpkin

Figure 1. Pumpkin

Pumpkin or pumpkin (Cucurbita moschata) is a type of creeping plant from the Cucurbitaceae family that has been known in various countries (Juna et al., 2006). There are three types of pumpkins that are most famous in the world, namely Cucurbita moschata, Cucurbita maxima and Cucurbita pepo (Lee et al., 2003).

Pumpkin is one type of pumpkin that is quite popular in Indonesia even though this fruit comes from Central Mexico and spread to the Americas. Pumpkin can grow intropical and sub-tropical areas. Pumpkin is a source of carotenoids, pectin, vitaminsand other compounds that are beneficial to health (Juna et al., 2006).

2.2.2. Mocaf Flour

Figure 2. Mocaf Flour

Mocaf flour or modified cassava flour is one of modified starch products by biochemical process through fermentation. In fermentation process, lactic acid bacteria (LAB) had the important role to change the structure of the starch by producing enzymes that hydrolyzed the starch. Mocaf flour contains high fiber, calcium and also gluten free.

2.2.3. Corn Flour

Figure 3. Corn Flour

Corn flour is a fine gain derived from the endosperm of corn

kernels that have been dried and crushed. It is used to make cornbread, muffins, pancakes, polenta, and tortillas. Corn flour is very useful for gluten-free quick breads.

2.2.4. Granulated Sugar

Figure 4. Sugar

Granulated sugar is a pure sugar that has been crystallized and centrifuged and then sent through a granulator where the crystals are dried, separated, and screened.

2.2.5. Egg

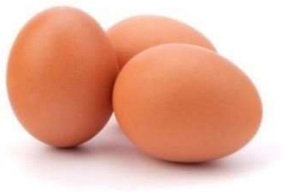


Figure 5. Egg

Eggs are an efficient, rich source of protein and vitamins. One egg has only 75 calories but 7 grams of high-quality protein, 5 grams of fat, and 1.6 grams of saturated fat, along with iron, vitamins, minerals, and carotenoids. The egg is a powerhouse of disease-fighting nutrients like lutein and zeaxanthin.

2.2.6. Vegetable Oil

Figure 6. Vegetable Oil

Vegetable oil is a mild, odorless, flavorless, light-colored cooking oil extracted from seeds or other part of plants that is good for cooking, frying ,or making salad dressings.

2.2.7. Soy Milk

Figure 7. Soy Milk

Soy milk is a high-protein liquid made from ground cooked soybeans that is usually fortified (as with calcium and vitamins). Soy milk is rich in omega-3 fatty acids, which are “healthy” fats that your body cannot form on its own. Omega-3 fatty acids are linked to a reduced risk of dementia and Alzheimer's

2.3. TOOLS AND EQUIPMENT

2.3.1 Knife

Figure 8. Knife

Knife is a tool, usually with a metal blade and a handle, used for cutting and spreading food or other substances. A multipurpose kitchen knife with a wide blade usually 8 to 10 inches long and tapering to a point, used for slicing, chopping, etc.

2.3.2. Stove

Figure 9. Stove

Stove is a portable or fixed apparatus that burns fuel or uses electricity to provide heat (as for cooking or heating). The first of historical record was built in 1490 in Alsace, entirely of brick and tile, including the flue. The later Scandinavian stove had a tall, hollow iron flue containing iron baffles arranged to lengthen the travel of the escaping gases in order to extract maximum heat.

2.3.3. Steamer

Figure 10. Steamer

A type of cookware consisting of inserts or layers with perforations in the bottom, that are assembled together and used to cook food with the use of steam. The steamer is made to position foods above, not in, water that is boiling or hot enough to produce steam to cook foods with a moist hot air.

2.3.4. Dehydrator

Figure 11. Dehydrator

A dehydrator is a small appliance that uses hot air to remove the water from foods like fruits, meats and vegetables. Food dehydrators work by circulating air at very low temperatures for an extended period of time. But instead of cooking with heat, dehydrators draw moisture out of foods so they dry out and can be enjoyed for along time.

2.3.5. Blender

Figure 12. Blender

Blender is an electric appliance for grinding or mixing a food. A blender has ajar with blades at the on the bottom that cut food into small particles and whirl them around.

2.3.6. Strainer

Figure 13. Strainer

A strainer (or sieve) is a circular gadget with a finely-woven mesh net used for separate and break up clumps in dry ingredients such as flour, as well as to aerate and combine them.

2.3.7. Balloon whisk

Figure 14. Balloon Whisk

A whisk is a cooking utensil which can be used to blend ingredients smooth or to incorporate air into a mixture, in a process known as whisking or whipping. Most whisks consist of a long, narrow handle with a series of wire loops joined at the end.

2.3.8. Bowl

Figure 15. Bowl

Stainless steel bowls are best for mixing heavy ingredients. The bowls themselves are lightweight, making them a little easier to handle. They are also best for dough making. They are very versatile during the food preparation of the meal.

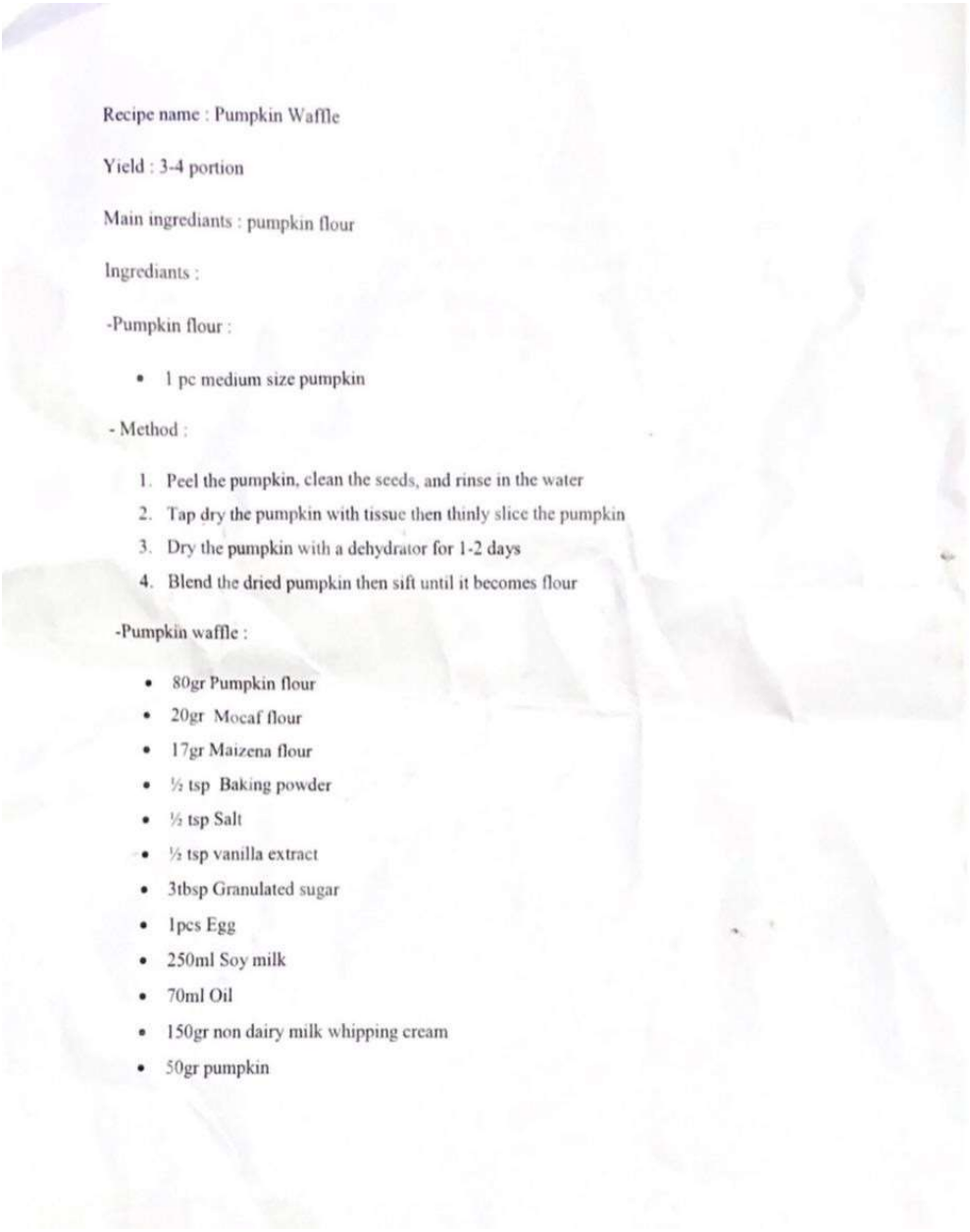
2.3.9. Waffle Maker

Figure 16. Waffle Maker

A waffle maker, or a waffle iron, is an essential cookware appliance that is used to make waffles. The waffle iron basically consists of two irons forming a top and bottom, each with a honeycomb pattern that is hinged together. The batter is poured onto bottom iron and the top iron is then closed down onto the batter, sealing the batter into the iron.

2.4. RECIPE

2.4.1. Approved Recipe



Recipe name : Pumpkin Waffle

Yield : 3-4 portion

Main ingrediants : pumpkin flour

Ingrediants :

-Pumpkin flour :

- 1 pc medium size pumpkin

- Method :

1. Peel the pumpkin, clean the seeds, and rinse in the water
2. Tap dry the pumpkin with tissue then thinly slice the pumpkin
3. Dry the pumpkin with a dehydrator for 1-2 days
4. Blend the dried pumpkin then sift until it becomes flour

-Pumpkin waffle :

- 80gr Pumpkin flour
- 20gr Mocaf flour
- 17gr Maizena flour
- ½ tsp Baking powder
- ½ tsp Salt
- ½ tsp vanilla extract
- 3tbsp Granulated sugar
- 1pcs Egg
- 250ml Soy milk
- 70ml Oil
- 150gr non dairy milk whipping cream
- 50gr pumpkin

Figure 17. Scan Approved Recipe

2.4.2. Revised Recipe

Recipe name : Pumpkin Waffle

Yield : 3-4 portionMain

ingrediants : pumpkin flour

Ingrediants :

Pumpkin flour :

- 1 pc medium size pumpkin

Method :

1. Peel the pumpkin, clean the seeds, and rinse in the water
2. Tap dry the pumpkin with tissue then thinly slice the pumpkin
3. Dry the pumpkin with a dehydrator for 1-2 days
4. Blend the dried pumpkin then sift until it becomes flour

Pumpkin waffle :

- 70gr Pumpkin flour
- 30gr Mocaf flour
- 20gr Maizena flour
- ½ tsp Baking powder
- ½ tsp Salt
- ½ tsp vanilla extract
- 40g Granulated sugar
- 1pcs Egg
- 250ml Soy milk
- 70ml Oil
- 40g Maple syrup

Reason :

1. Pumpkin flour 80g = 70g (cause waffles have a bitter taste from pumpkin flour so the weight of pumpkin flour is reduced by 10g to reduce the bitter taste)
2. Mocaf flour 20g = 30g (cause the pumpkin flour is reduced by 10g, the amount of mocaf flour is increased by 10g).
3. Replace whipping cream and pumpkin with maple syrup for waffle topping (cause more tasty and simple).

2.5. PRODUCT PROCESSING SEQUENCE USING FLOWCHART

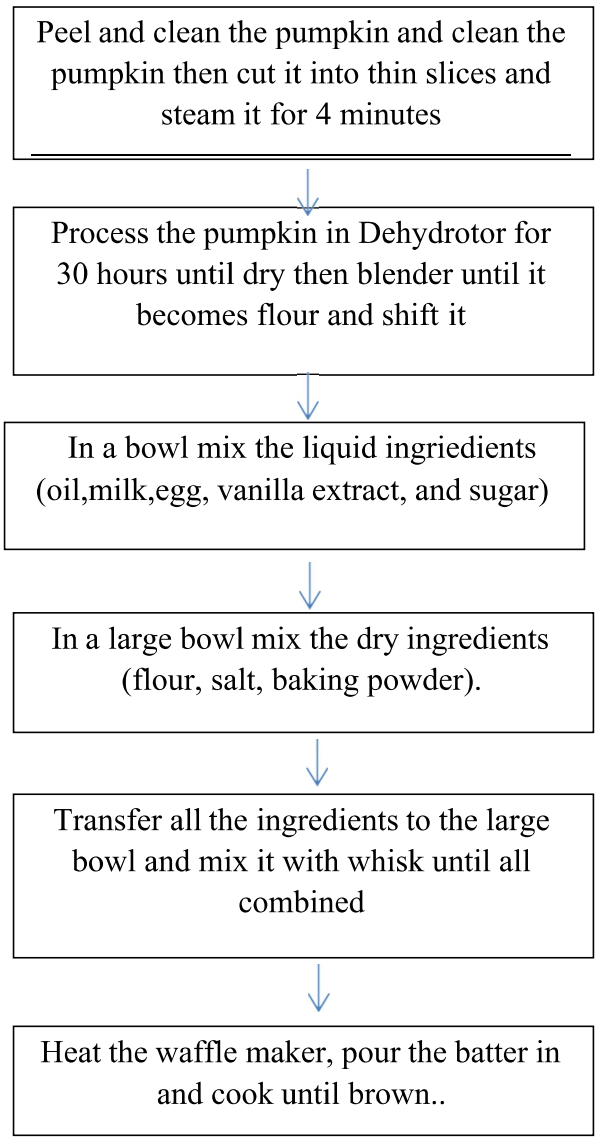


Figure 18 . Flowchart of Procssing Pumpkin Waffle

2.6. PRODUCT PROCESSING METHOD WITH PICTURE

1. Peel the pumkin, clean the seedsm rinse in the water and then thinly slice.


Figure 19. Slice Pumpkin. Pumpkin peeled, washed, and sliced into small pieces

2. Steam the pumpkin for 4 minutes then remove let it cool and process with a dehydrator for 1-2 days.


Figure 20. Process Pumpkin. Steam the pumpkin and then process in thedehydrator

3. Blender the dry pumpkin and then shift with strainer until it becomes flour.

Figure 21. Blender the dry pumpkin. Blender the dry pumpkin and the shift untilbecome flour

4. Mix all the ingredients used whisk.

Figure 22. **Mix all the ingredients.** Mix all the dry and wet ingredients

5. Pour the batter in the waffle maker for 4-5 mins until brown and the waffle ready

Figure 23. **Make the waffle**. Make the waffle with waffle maker