

CHAPTER III

METHODS

3.1 Time and Place

Culinary Innovation and Product Development was done from February until July at culinary kitchen, Ottimmo International.

3.2 Ingredients and Utensils

3.2.1 Ingredients

Table 3. 1 Ingredients for Pumpkin Flour

No	Ingredients	Quantity
1	Pumpkin	4 kg

Table 3. 2 Ingredients for Brownies

No	Ingredients	Quantity
1	Dark cooking chocolate	95 g
2	Unsalted butter	80 g
3	Eggs	3 pcs
4	Caster sugar	90 g
5	Cocoa powder	25 g
6	Milk	75 g
7	Choco chips	25 g
8	Pumpkin flour	100 g
9	Mocaf flour	25 g
10	Vanilla extract	1 tsp
11	Salt	A pinch

3.2.2 Utensils

Table 3. 3 Utensils for Brownies

No	Utensils	Function
1	Knife	Cut pumpkin and chocolate
2	Cutting board	Place mat for cutting
3	Peeler	Peel pumpkin fruit
4	Tray	Place to dry the pumpkin in oven
5	Small mixing bowl	Melt the butter and chocolate, to contain the ingredients
6	Large mixing bowl	Mix wet ingredients, brownie batter
7	Sauce pan	Boil water
8	Sieve	Sieve dry ingredients
9	Spoon	Take out pumpkin seeds
10	Silicone spatula	Scraper, mix brownie batter
11	Digital scale	Weighing ingredients
12	Mixer	Mix eggs and sugar
13	Baking pan	Place to put the brownie batter
14	Baking paper	Coat the baking pan

3.3 Processing Method

The processing method to make pumpkin flour:

1. Wash pumpkin
2. Peel pumpkin skin with knife
3. Take out the seeds and dirt
4. Cut pumpkin into pieces
5. Shred pumpkin or cut thin into 1 mm
6. Spread on a tray or a container then sun dry 2-3 days

7. Oven dry in 60°C for 5-6 hours until completely dry
8. Grind with food processor
9. Strain using mesh 60

The processing method to make brownies:

1. Pre-heat oven to 175°C
2. Melt together the unsalted butter and dark chocolate using bain marie method
3. Mixer the eggs and sugar until pale, fluffy, and increased in volume
4. Slowly add the melted butter and chocolate, milk, and vanilla extract, mix until the chocolate evenly incorporated
5. Sieve pumpkin flour, mocaf, cocoa powder, salt, and mix
6. Add in the choco chips (half in the batter and half as topping)
7. Bake in the pre-heated oven 175°C for 35 minutes
8. Allow to cool
9. Cut into smaller pieces

3.4 Flow Chart

The flow chart of processing method is presented in Figure 3.1.

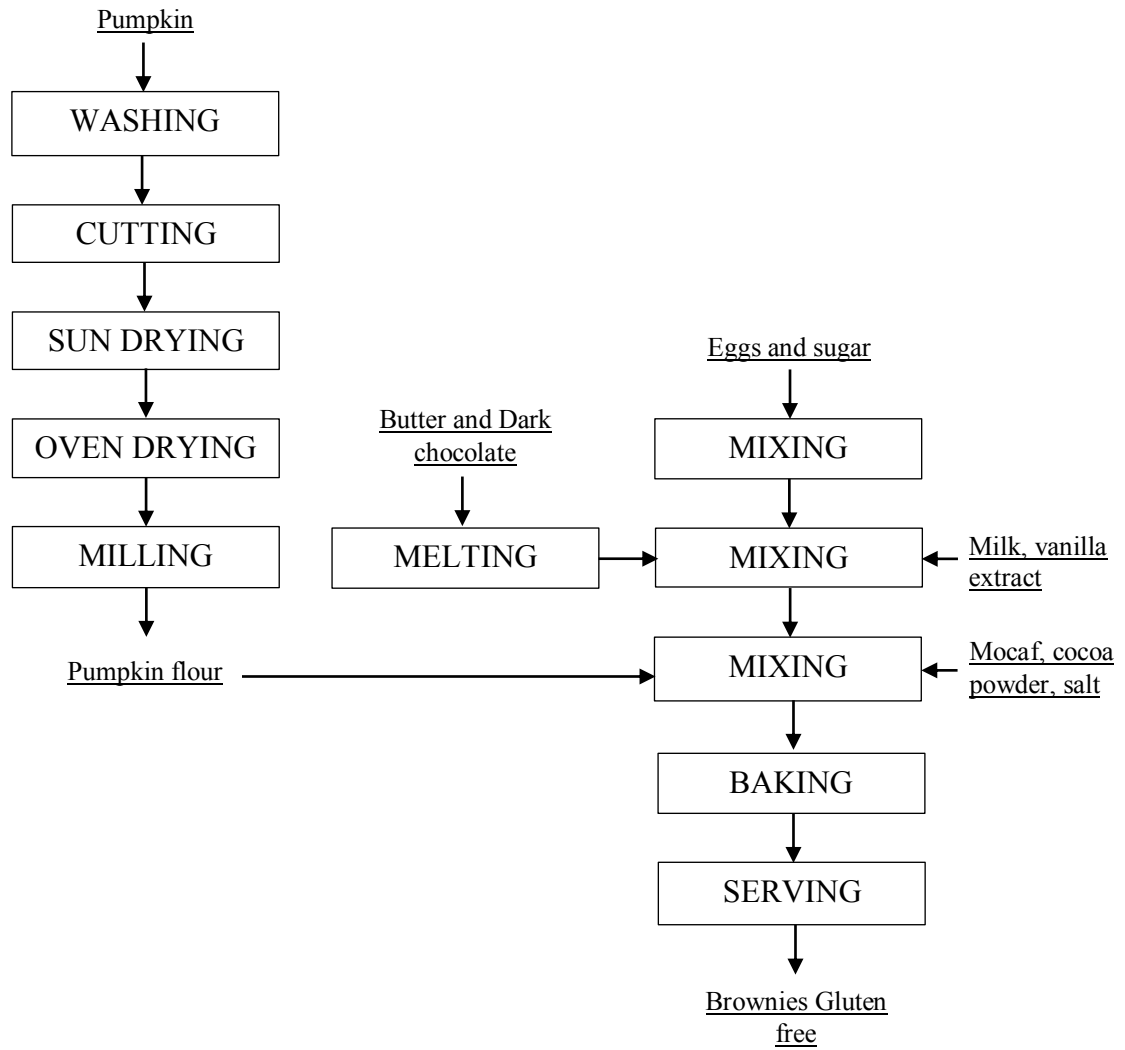


Figure 3. 1 Flowchart Gluten Free Brownies