

CHAPTER 2

PRODUCT OVERVIEW

2.1 DESCRIPTION OF THE MATERIAL TO BE USED



Picture 1. List of Ingredients

1. Vegan Dashi Stock

Vegan Dashi is made from dried kombu seaweed and dried shiitake mushrooms, that is boiled in hot water for a couple of minutes to make a savory and aromatic stock. This stock will help to make the Vegan Takoyaki Batter.

2. Whole Pastry Flour

Whole Pastry Flour is used to bind the stock and the protein to make the Takoyaki 'shell'. Whole Wheat Pastry Flour is 100% stone ground from the finest soft white wheat. The lower protein content of this flour makes it

perfect for whole grain baked goods like pie crust, cake, cookies, biscuits and pancakes.

3. Rice Flour

Rice Flour adds starch component to the Batter so the batter can get crispy and golden brown while frying. 158 g of Rice flour, unenriched, white contains 0.00 mcg vitamin A, 0.0 mg vitamin C, 0.00 mcg vitamin D as well as 0.55 mg of iron, 15.80 mg of calcium, 120 mg of potassium.

4. Avocado

Avocado will be the egg substitute in the Takoyaki batter. Avocado will provide proteins, fat replacement, and will change the flavor and texture. Avocado provides the creaminess for the Takoyaki. Avocado also gives many nutrients, including fiber, healthy fats, vitamin C, vitamin E, vitamin B6, potassium, magnesium, and folate. Enjoying them regularly could help improve overall diet quality.

5. Kombu seaweed

Kombu Seaweed is a dried Japanese seaweed that is used for the stock. It gives off a savory and salty flavor. Nutritionally, kombu contains iodine, which is important for thyroid function, iron, calcium, along with trace minerals. Kombu contains vitamins A & C as well. Kombu has a magical property (technically the enzyme glutamic acid) that acts as a natural bean tenderizer.

6. Dried Shitake Mushrooms

Dried Shitake Mushroom is used to replace Fish stock in dashi stock. Mushrooms pack a punch when it comes to vitamins and minerals including zinc, magnesium, copper, potassium, selenium, phosphorous, and a number of B vitamins and antioxidants. They are also a fairly good source of fiber.

7. King Trumpet Mushrooms

King Trumpet Mushrooms is a replacement for the octopus used in the fillings of the Takoyaki. This mushroom will help to get the octopus chewy texture.

8. Ginger

Seasoning for the Takoyaki. The main ginger vitamins are vitamin C (ascorbic acid) and B₉ (folate), but it also contains minerals, such as potassium and magnesium. Vitamin C is an important antioxidant found in ginger that aids in the development and health of many of the body's tissues, including the skin and bones.

9. Vegan Mayo

Condiments that is used for the Takoyaki. Vegan mayo provides vitamin E and K, sodium, selenium and also potassium

10. Vegan Katsuobushi

Garnish used for the Takoyaki.

11. Green Onions

Garnish used for the Takoyaki. Green (spring) onions are rich in Vitamin A, Vitamin C, calcium, phosphorous, folate (folic acid), and potassium. These onions are naturally low in calories, fat and sodium.

12. Worcester Sauce

Sauce used to season and give Takoyaki depth. Though not a significant source of nutrients, Worcestershire sauce contains a minute number of several essential vitamins and minerals. A 5-gram serving provides very small amounts of vitamin C, iron, zinc, copper, and potassium.

13. Soy sauce

Sauce used to season takoyaki fillings. It is also a good source of Riboflavin, Vitamin B₆, Magnesium and Copper, and a very good source of Protein, Niacin, Iron, Phosphorus and Manganese.

2.2 THE TOOLS USED DURING THE PROCESS



Picture 2. List of Tools Used

1. Stainless steel bowls
A bowl that can be used to place and mixed ingredients
2. Wisk
Wisk helps to mixed the wet batter
3. Knife
Tool used to cut ingredients
4. Cutting board
A place to cut your ingredients
5. Sauce Pan
Pan to cook liquid aspect of the dish
6. Silicone Spatula
Used to stir and mix the ingredients in the pan
7. Sautee pan
Used to cook dry ingredients
8. Gas stove
Gas stove is used to cook all ingredients
9. Digital Scale
Digital scale is used to weight ingredients

10. Takoyaki Pan

Takoyaki frying pan to cook and shape Takoyaki into balls

11. Blender

Blender is used to blend ingredients that needs blending

12. Squeeze bottle

Squeeze bottle is used to add sauce and condiments to Takoyaki

13. Measuring Jug

Measuring jug is used to measure liquid type ingredients.

14. Chopsticks

Chopstick is used to mold Takoyaki into shape

2.3 APPROVED AND REVISED RECIPE

Recipe Name : Vegan Takoyaki
Serving Size : 1-2 portion
Main Ingredients : Avocado

Ingredients :

- 50gr King Trumpet Mushrooms
- 300ml Dashi Stock *off bar*
- 100g whole pastry flour *Ken*
- 20g rice flour *vegan*
- 100gr Avocado
- Vegan Katsuobushi (made from dried shiitake mushrooms and kombu seaweed)
- Vegan Mayo
- Green Onions
- Worcester Sauce
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Method :

1. Sauteed King Trumpet Mushrooms with Soy
2. Whisk all takoyaki batter
3. Pre heat takoyaki pan to 200c, put oil and pour the batter
4. Put king trumpet mushrooms, redginger, and green onions on the pan
5. make batter into a shape of ball
6. Serve with Mayonnaise and Worcester sauce

Student Name : Nathaniel Jason T
Advisor Name : Gilbert Hadiwirawan
Date & time of submission : (filled by Academic) 1 April 22 / 17.40.

Picture 3. Recipe Approval 1

RECIPE BACKGROUND (50 – 100 WORDS)

I chose Takoyaki because I love Japanese food and Japanese Cuisine. I want all people to experience the street foods of Japanese cuisine. I want to do research mostly on changing the takoyaki batter and katsuobushi to become vegan. People who usually make vegan takoyaki just left out the katsuobushi and just left out the egg, for me i want to develop the vegan takoyaki recipe so there's no nutrients lost and i want the takoyaki to taste like the original.

APPROVAL TABLE (filled by advisor)

CHECK LIST	POINTS	APPROVAL
WASTE MANAGEMENT	20	X
PROCESSING METHOD	20	✓
UNIQUE INGREDIENTS	20	✓
PRODUCT OUTLOOK	20	✓
HEALTH & NUTRITION	15	✓
NEW MODIFICATION	5	✓
TOTAL		80

*approval min. 50 points

NOTES (filled by advisor)

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Picture 4. Recipe Approval 2



**CULINARY INNOVATION AND NEW
PRODUCT DEVELOPMENT
SENSORY TEST**

DATE : 28 April 2022
NAME : Nathaniel Jason Tjundawan
NIM : 2074130010051
PRODUCT : Vegan takoyaki
ADVISOR : Gilbert Yanuar Hadiwirawan, A.Md. Par

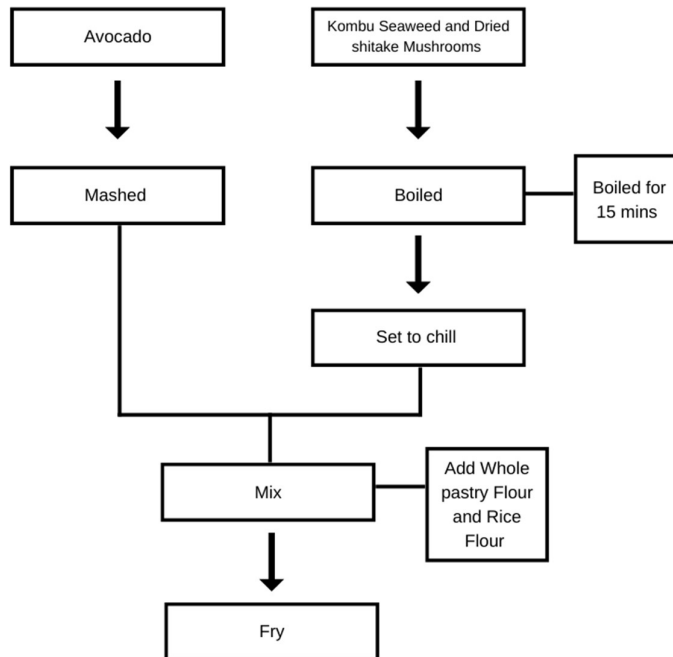
PANELIST	SIGHT	SMELL	TEXTURE	TASTE	TOTAL
Panelist 1	√	√	√	√	√
Panelist 2	√	√	X	√	√
Panelist 3	√	√	√	√	√
Panelist 4	√	√	√	√	√
Panelist 5	X	√	√	√	√
Panelist 6	√	√	√	√	√
Panelist 7	√	√	√	√	√
Panelist 8	√	√	√	√	√
Panelist 9	√	√	√	√	√
Panelist 10	√	√	√	√	√

NOTES :



Picture 5. Sensory Test

2.4 PRODUCT PROCESSING SEQUENCE USING FLOWCHART



Picture 6. Processing Flowchart

2.5 PRODUCT PROCESSING METHOD WITH PICTURES

1. Boil some water on high heat



Picture 7. Boiling Water

2. Add Dried shitake mushrooms and Kombu seaweed, to make dashi stock



Picture 8. Adding Kombu and Dried Shitake

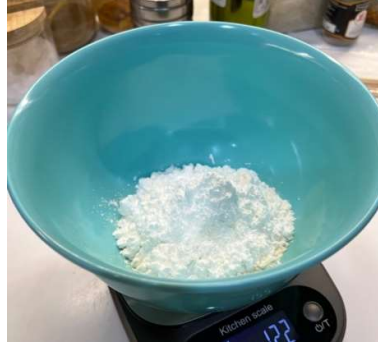
3. Boil for 8-10 minutes



Picture 9. Boiling Dashi Stock

4. Set aside to cool down

5. While waiting for the dashi stock to chill, measure whole flour, and rice flour according to recipe



Picture 10. Measuring Dry Ingredients

6. Cut 100gr of avocado



Picture 11. Measuring Avocado

7. After Dashi stock is chilled, mix in a bowl Flour, Stock, and avocado until smoothly blended. Check for consistency (if too thick, add more stock, and if it's too runny add more flour until batter like consistency).



Picture 12. Mixing Dry and Wet ingredients

8. Chop up king trumpet mushrooms until bite size.



Picture 13. Chopping Mushrooms

9. Pre heat sautee pan (medium heat)



Picture 14. Pre-heat Sautee pan

10. Add 2 tablespoon of oil, once heated add king trumpet mushrooms



Picture 15. Cooking Mushrooms

11. Cooking mushrooms until soft

12. Season mushrooms with soy sauce, salt, and pepper, and set aside.



Picture 16. Season Mushrooms

13. Preheat Takoyaki pan to 180 celcius



Picture 17. Pre-heating Takoyaki pan

14. Add Takoyaki batter, until half cooked

15. Once half cooked, add ginger and king trumpet mushrooms to the pan.



Picture 18. Cooking Takoyaki

16. Flip the Takoyaki balls and add more batter to even out the mold.



Picture 19. Flipping Takoyaki

17. Cook Takoyaki until golden brown and crispy



Picture 20. Finish cooking takoyaki

18. Set aside the Takoyaki to cool down.

19. Place Takoyaki in the food packaging



Picture 21. Placing Takoyaki in Packaging

20. Add Vegan mayonnaise, and sauce to Takoyaki

21. Garnish Takoyaki with vegan Katsuobushi and Green onions.



Picture 22. Serve Takoyaki

22. It's ready to serve