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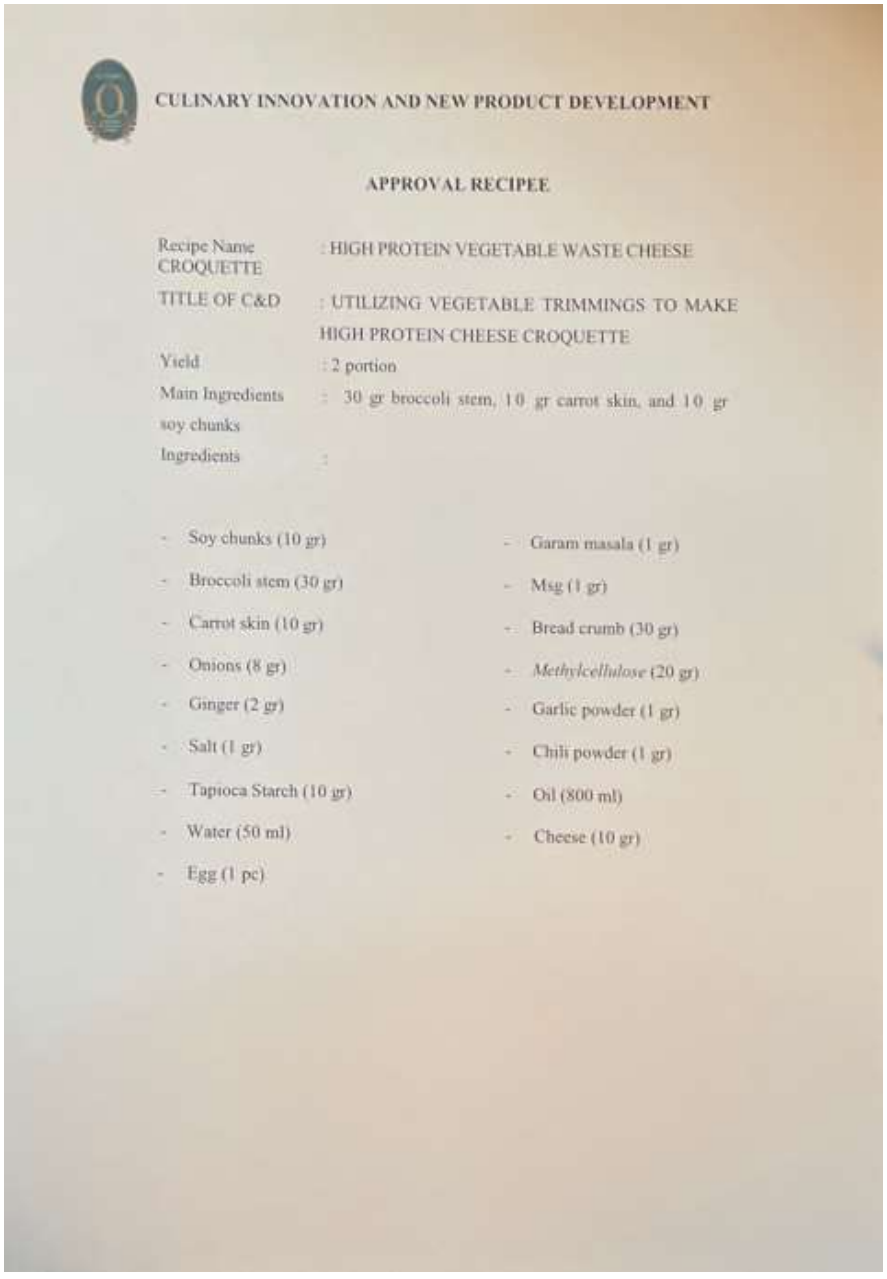
APPENDIX

1. Approval recipe



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

APPROVAL RECIPEE

Recipe Name : HIGH PROTEIN VEGETABLE WASTE CHEESE CROQUETTE

TITLE OF C&D : UTILIZING VEGETABLE TRIMMINGS TO MAKE HIGH PROTEIN CHEESE CROQUETTE

Yield : 2 portion

Main Ingredients : 30 gr broccoli stem, 10 gr carrot skin, and 10 gr soy chunks

Ingredients :

- Soy chunks (10 gr)
- Broccoli stem (30 gr)
- Carrot skin (10 gr)
- Onions (8 gr)
- Ginger (2 gr)
- Salt (1 gr)
- Tapioca Starch (10 gr)
- Water (50 ml)
- Egg (1 pc)
- Garam masala (1 gr)
- Msg (1 gr)
- Bread crumb (30 gr)
- *Methylcellulose* (20 gr)
- Garlic powder (1 gr)
- Chili powder (1 gr)
- Oil (800 ml)
- Cheese (10 gr)

Method

1. Clean all the vegetables and aromatics with water
2. Chop the broccoli stem and carrot skins
3. Remove excess water from the broccoli stem and carrot skins
4. Grate the onion and ginger
5. Put in soya chunks in water and let it soak for 10 minutes
6. Remove excess water from soy chunks
7. Blend in broccoli stem, carrot skin, onions, soy chunks, ginger, msg, *methylcellulose*, garlic powder, salt, chili powder, garam masala, tapioca starch, and water
8. Shape to round or oval-shaped and flatten the mixture
9. Insert cheese and cover it up with the mixture
10. Coat with egg then bread crumb
11. Fry for 8-10 minutes until golden brown in colour

Product Description

This product is mainly made from parts of vegetables that are usually unused by people or thrown away without being processed that is carrot's skin and broccoli's stem. With the help of *Methylcellulose* which is a derivative of cellulose that usually comes from plants, the product can bind well because of the thickening and binding character of the *Methylcellulose*. This product utilizes parts that are usually thrown away by people and can help reduce food waste around the world. This product can be an example of a new economy source and to inspire creativity and innovation. This cheese croquette also uses soy chunks which is a high source of protein with affordable price due to using vegetable waste/trimmings. This cheese croquette contains high fiber and vitamin from the vegetables and high protein and minerals from the oatmeal.

CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

TRIAL PROGRESS

The trial of the product making was executed on 21 March until 23 June 2025. The croquette binds quite well due to the usage of *methylcellulose* and tapioca starch. To balance out the flavor of soy chunks, more seasoning and aromatics will be added such as ginger and onions. The dough is coated with egg and bread crumbs to add texture and flavor to the dish. The most suitable cooking method used is frying because it can absorb oil that creates a crispy texture and savory taste. The addition of cheese also enhances the flavor and fat content which is suitable for a croquette.

TRIAL DOCUMENTATION

(product pictures)

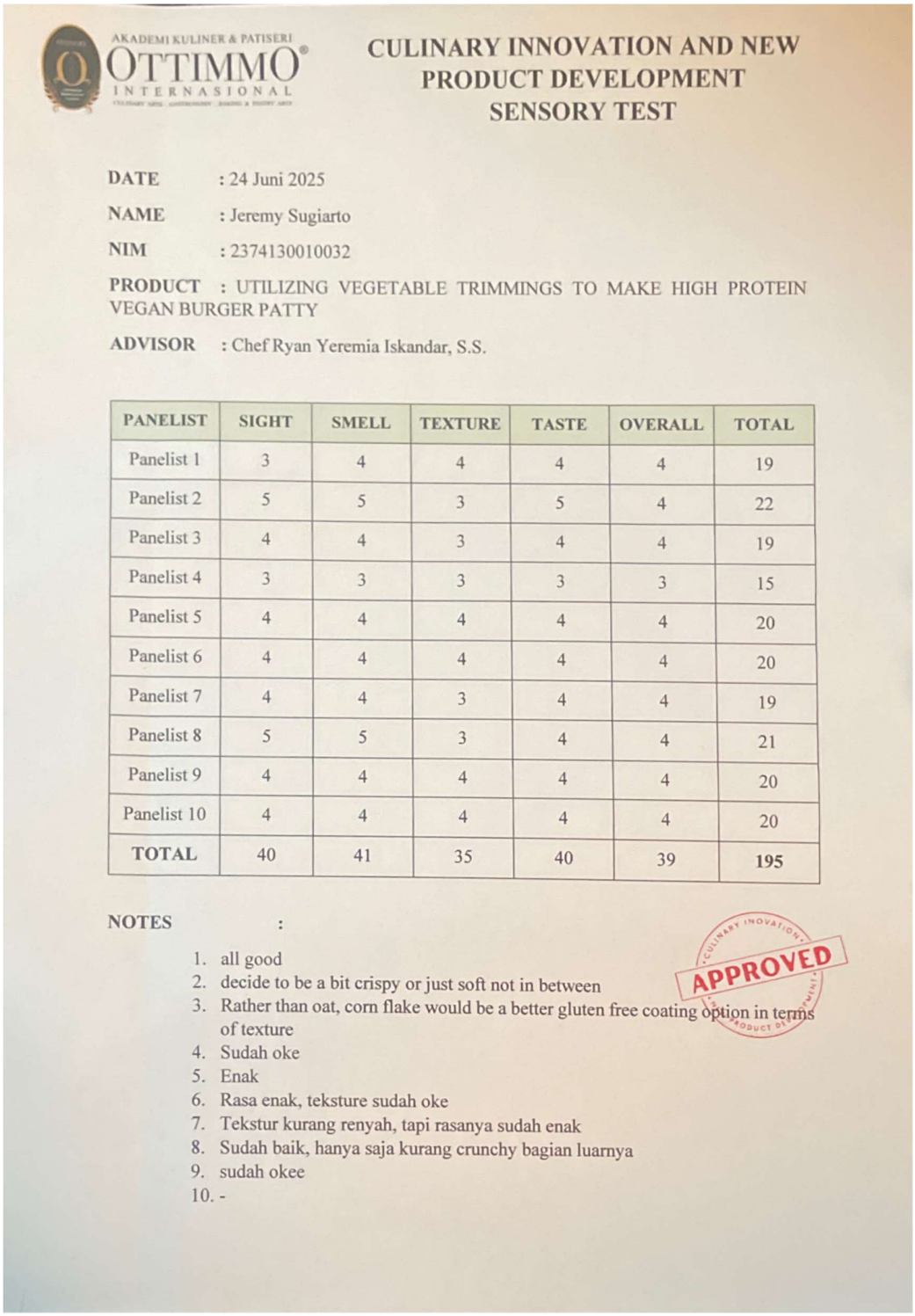
CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

Student Name : Jeremy Sugiarto

NIM : 2374130010032

Advisor	1st Examiner	2nd Examiner
Name: Chef Ryan Yeremia Iskandar, S.S. Date:	Name: Heni Adhianata, S.TP., M. Sc Date: 24/3/2025	Name: Novi Indah Permata Sari, S.T., M.Sc Date: 20/3/25

2. Approved sensory



AKADEMI KULINER & PATISERI
OTTIMMO INTERNASIONAL

CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT SENSORY TEST

DATE : 24 Juni 2025

NAME : Jeremy Sugiarto

NIM : 2374130010032

PRODUCT : UTILIZING VEGETABLE TRIMMINGS TO MAKE HIGH PROTEIN VEGAN BURGER PATTY

ADVISOR : Chef Ryan Yeremia Iskandar, S.S.

PANELIST	SIGHT	SMELL	TEXTURE	TASTE	OVERALL	TOTAL
Panelist 1	3	4	4	4	4	19
Panelist 2	5	5	3	5	4	22
Panelist 3	4	4	3	4	4	19
Panelist 4	3	3	3	3	3	15
Panelist 5	4	4	4	4	4	20
Panelist 6	4	4	4	4	4	20
Panelist 7	4	4	3	4	4	19
Panelist 8	5	5	3	4	4	21
Panelist 9	4	4	4	4	4	20
Panelist 10	4	4	4	4	4	20
TOTAL	40	41	35	40	39	**195**

NOTES :

1. all good
2. decide to be a bit crispy or just soft not in between
3. Rather than oat, corn flake would be a better gluten free coating option in terms of texture
4. Sudah oke
5. Enak
6. Rasa enak, teksture sudah oke
7. Tekstur kurang renyah, tapi rasanya sudah enak
8. Sudah baik, hanya saja kurang crunchy bagian luarnya
9. sudah okee
10. -

APPROVED

3. Consultation Form

Akademi Kuliner & Patiseri
OTTIMMO INTERNASIONAL
CULINARY ARTS · GASTRONOMY · BAKING & PASTRY ARTS

CONSULTATION FORM
CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

Name : Jeremy Sugiarto
Student Number : 2374130016032
Advisor : Chef Jerry

No	Date	Topic Consultation	Name/ Signature	Advisor Signature
1.	20/06/2025	Trial Product		
2.	24/06/2025	Proposal Content		
3.	01/07/2025	Proposal Content		
4.	10/10/2025	Revisi Proposal		
5.	08/10/2025	demo & konsul		
6.	10/10/2025	Revisi proposal		

No	Date	Topic Consultation	Name/ Signature	Advisor Signature
7.	08/10/2025	demo & konsul		
8.	01/07/2025	konsul		
9.	30/09/2025	konsul		
10.	02/09/2025	konsul		

4. Systematic process

1) Cleaning and cutting the vegetable ingredients

2) Putting the ingredients in the blender

3) Shaping the mixture by flattening and filling it with vheese

4) 

5) Freeze

6) Heat up oil

7) Fry