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## APPENDIX



Akademi Kuliner & Patiseri  
**OTTIMMO**  
INTERNASIONAL  
INDONESIA

### CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT SENSORY TEST

**DATE** : 20 Mei 2024

**NAME** : Fellicia Can

**NIM** : 2274130010059

**PRODUCT** : THE UTILIZATION OF FERMENTED BREADFRUIT FLOUR AS AN ALTERNATIVE FOR FLOUR-BASED TORTILLA

**ADVISOR** : Gilbert Yanuar Hadiwirawan, A.Md. Par.

PANELIST	SIGHT	SMELL	TEXTURE	TASTE	OVERALL	TOTAL
Panelist 1	4	5	4	4	4	21
Panelist 2	4	4	4	4	4	20
Panelist 3	4	3	4	4	4	19
Panelist 4	5	5	4	4	4	22
Panelist 5	4	2	4	4	4	18
Panelist 6	3	4	3	3	3	16
Panelist 7	5	4	3	4	4	20
Panelist 8	4	5	4	4	4	21
Panelist 9	5	5	4	4	4	22
Panelist 10	5	4	3	4	4	20
<b>TOTAL</b>	43	41	37	39	39	<b>199</b>

**NOTES** :

1. Kulit tortila terlalu padat
2. Enak, dominan rasa keju
3. teksturnya sedikit keras cm oke
4. all good
5. Bau sukun masih kuat
6. -
7. A bit too dry
8. -
9. Good
10. -



### Sensory Test Result Appendix 1



Academi Kuliner & Pastry  
**OTTIMO**  
 INTERNATIONAL

**CONSULTATION FORM**  
**CULINARY INNOVATION AND**  
**NEW PRODUCT DEVELOPMENT**

Name : Felicia Gan  
 Student Number : 22141500160519  
 Advisor : Chef Gilbert

No	Date	Topic Consultation	Name/ Signature	Advisor Signature
1.	19 Nov 2024	Judul Dikur Mentor Pembuat Sajian		
2	18 Nov 2024	Product Consultation	Jessica	
3	27 / 09	Revisi dan Revisi Bahan Baku dan Apabila	Elina	
4	15 Aug 2024	product consultation		
5	14 May 2024	product development consultation		
6	15 May 2024	Product consultation		

No	Date	Topic Consultation	Name/ Signature	Advisor Signature
7.	16 May 2024	product development consultation & guidance		
8	17 May 2024	product development consultation 1-3	Jessica	
9	20 May 2024	proposal consultation 1-3	Elina	
10	16 July 2024	proposal revision	Elina	
11	16 July 2024	proposal revision	Jessica	
12	19 July 2024	proposal consultation 4-5	Elina	

Consultation Form  
 Appendix 2

#### APPROVAL RECIPE

Recipe Name : Breadfruit Tortilla  
TITLE OF C&D : The utilization of fermented breadfruit flour as an alternative for flour-based tortilla.  
Yield : 4 portion  
Main Ingredients : 300 g Breadfruit  
Ingredients :

Fermented Breadfruit Flour :

- 300 g ripe Breadfruit, peeled, chopped, and washed
- 3 g Tapai Yeast
- 25 g Granulated Sugar

Fermented Breadfruit Tortilla

- 100 g Tapioca Starch
- 80 g Margarine
- 4 g Salt
- 300 g Water

Method :

Fermented Breadfruit Flour :

1. Peel and slice the breadfruit into thin slices.
2. Sprinkle sugar and tapai yeast and incorporate well.
3. Prepare a clean container with no lid to store the breadfruit inside to ferment.
4. Cover with a clean cloth, let it ferment unrefrigerated for 48 hours.
5. After it's fermented, layer on a baking tray and dry at 60°C for 6 hours in the oven or dehydrator.
6. Blend the dried up breadfruit sheet until it resembles flour. Proceed to sift it to get rid of big clumps.

Recipe  
Appendix 3

#### TRIAL PROGRESS (50 – 100 WORDS)

The breadfruit was left alone for a few days to let it ripen before processing; skinning and cutting it was difficult at first. However, steaming was a reasonably easy process up until the point of fermentation. The breadfruit became softer and more mushy during fermentation, which made mashing it into a thin layer faster. The drying process took some time, but in the process, the aroma profile was unique and emits a sweet scent. Because the spice blender that was available is small, blending the breadfruit sheets was a bit time-consuming and tedious. The flour was then sifted.

All of the ingredients are combined to make the tortilla dough, which is then kneaded and allowed to rest. The dough was then divided into portions and flattened, then cooked on a hot pan until brown spots appeared. Everything will be ready for serving after it is cooked. Overall, the tortilla turned out great, although the color is darker than expected.

#### TRIAL DOCUMENTATION



## Recipe Appendix 4

#### Fermented Breadfruit Tortilla :

1. Add the flour to a large mixing bowl followed by tapioca starch and a large pinch of salt.
2. Mix well then add margarine.
3. Add water and use hands to start kneading until the dough comes together into a ball.
4. Let it rest for 15 minutes.
5. Heat up a cast iron skillet or pan on medium heat.
6. Portion the dough into even balls and press with a tortilla press to create an uniform shape.
7. Cook on hot skillet or pan, flipping after 1 minute or until bubbles and golden brown spots can be seen. Cook for another 1 minute on the other side.
8. Remove and serve as a side dish.

#### Product Description

This fruit-based tortilla is soft and supple, tastes neutral, and is free of preservatives, artificial flavoring, and color. It is also gluten-free. Breadfruit tortilla is an appealing substitute for regular wheat tortilla, especially for people who are looking for gluten-free solutions or want to improve the nutritional value of their diet. Packed with fiber, vitamins, minerals, and antioxidants, breadfruit tortilla is a nutrient-dense alternative to wheat tortilla's refined texture. Because it is free of gluten, people with celiac disease or gluten sensitivity can eat it, and its lower glycemic index might help with blood sugar regulation. In addition, growing breadfruit trees uses less resources than growing wheat, making it a sustainable and eco-friendly practice.




Because of fermentation, the breadfruit flour itself is easier to digest, which may help those who have sensitive stomachs feel less bloated. Furthermore, by increasing the nutrients' availability, this technique guarantees that the tortillas are more nutrient-dense. The addition of probiotic cultures can result in the inclusion of good bacteria in the tortillas, which promote intestinal health. Additionally, the tortillas' taste profile is improved by the distinct smells and scents that fermentation adds. All things considered, the product obtained from fermenting breadfruit flour for tortillas is more nutrient-dense, tastes better, and might last longer.

## Recipe Appendix 5





Student Name : Fellicia Can  
 NIM : 2274130010059

Advisor	1-Examiner	2- Examiner
 Name: Gilbert Hadiwirawan Date: 13 / 08 / 24	 Name: Jessica Hartan Date: 13 / 08 / 24	 Name: Elma Sulistiya Date: 13 / 08 / 24

Recipe  
 Appendix 6



Sliced Breadfruit  
Appendix 7



Fermented Breadfruit  
Appendix 8



Appendix 9



Dried Breadfruit  
Appendix 10





Dough  
Appendix 11



Portioned Dough  
Appendix 12



Flattened Dough  
Appendix 13



Finished Product  
Appendix 14