BIBLIOGRAPHY

Alka, V., Pinky, B., & Neelam, K. (2017). Grab a healthy bite: Nutritional evaluation of barley based cookies. *Asian Journal of Dairy and Food Research, 36(1), 76–79.*

Arslan, M., Yaseen, A. A., & Mehmood, T. (2021). Development and quality evaluation of gluten-free cookies from rice and oat flour blends. *Journal of Food Processing and Preservation, 45(2), e15143.*

Asghar, A., Afzaal, M., Saeed, F., Ahmed, A., Ateeq, H., Shah, Y. A., Islam, F., Hussain, M., Akram, N., & Shah, M. A. (2023). Valorization and food applications of okara (soybean residue): A concurrent review. *Food Science & Nutrition, 11(7), 3631–3640.*

Čech, M., Herc, P., Ivanišová, E., Kolesárová, A., Urminská, D., & Grygorieva, O. (2020). Nutritional and technological potential of okara (soybean residue) in bakery products. *Potravinarstvo Slovak Journal of Food Sciences, 14(1), 1–9.*

Chen, C., & Pan, Z. (2023). An overview of progress, challenges, needs and trends in mathematical modeling approaches in food drying. *Drying Technology, 41(13), 1–20*. https://doi.org/10.1080/07373937.2023.2207636

Demirkesen Mert, I. (2016). Formulation of chestnut cookies and their rheological and quality characteristics: Use of chestnut flour in gluten-free cookies. *Journal of Food Quality, 39(4), 316–324.* https://doi.org/10.1111/jfq.12209

Duta, D. E., & Culetu, A. (2015). Evaluation of rheological, physicochemical, thermal, mechanical and sensory properties of oat-based gluten free cookies. *Journal of Food Engineering, 162, 1–8.*

Ginting, E., Elisabeth, D. A. A., Khamidah, A., Rinaldi, J., Ambarsari, I., & Antarlina, S. S. (2024). The nutritional and economic potential of tofu dreg (okara) and its utilization for high protein food products in Indonesia. *Journal of Agriculture and Food Research, 16, 101175.*

Holopainen-Mantila, U., Vanhatalo, S., Lehtinen, P., & Sozer, N. (2024). Oats as a source of nutritious alternative protein. *Critical Reviews in Food Science and Nutrition, 64(6), 1000–1015.* https://doi.org/10.1016/j.jcs.2024.103862

Jan, A., Sharma, H. K., & Riar, C. S. (2017). Sensory and physicochemical changes in gluten-free oat biscuits during storage. *Journal of Food Science and Technology, 54(13), 4323–4331.* https://doi.org/10.1007/s13197-017-2878-1

Kamel, B. S., & Stauffer, C. E. (2013). Advances in baking technology. *Springer Science & Business Media.*

Kosemani, B. S., Ilori, A. T., & Atere, A. O. (2021). Modification and optimization of a baking oven for small scale bread production. *Agricultural Sciences, 12(6), 630–644.*

Liu, M., Li, C., Zhang, Y., Yang, M., Gao, T., Cui, X., Wang, X., Xu, W., Zhou, Z., Liu, B., Said, Z., Li, R., & Sharma, S. (2023). Modeling and analysis of grinding force considering the effective working area based on grain geometric characteristics. *International Journal of Machine Tools and Manufacture, 186, 103962.*

Marsh, K., & Bugusu, B. (2007). Food packaging—roles, materials, and environmental issues. *Journal of Food Science, 72(3), R39–R55.* https://doi.org/10.1111/j.1750-3841.2007.00301.x

Milani, P., Haddad, L., Steiner, R., Mkambula, P., Ehsani, M., Kamau, D., Ndung'u, D., & de Pee, S. (2024). Fortified whole grains and whole blends: A timely food systems shift. *Global Food Security, 42, 100784*. https://doi.org/10.1016/j.gfs.2024.100784

Net, M., Kong, S., Say, M., Chea, S., & Tan, R. (2023). Physical properties, proximate analysis, and sensory characteristics of gluten-free cookies made from rice flour and okara. *Techno-Science Research Journal, 6(1), 1–10.*

Ng, C. Y., & Wang, M. (2023). Quinoa: Nutritional composition and functional properties. *Food Function and Technology, 3, 109.* https://doi.org/10.1002/fft2.109

Pathak, D. (2023). *Formulation, characterization, and shelf life study of gluten-free cookies using hill grains of Nepal* (Bachelor's thesis, Tribhuvan University). Tribhuvan University Repository.

Pathan, S., & Siddiqui, R. A. (2022). Nutritional composition and health benefits of quinoa: A comprehensive review. *Nutrients, 14(3), 558.* https://doi.org/10.3390/nu14030558

Rahayu, T. I., Ariyana, M. D., Amaro, M., Handayani, B. R., & Widyastuti, S. (2020). Inovasi Pengolahan Ampas Tahu Menjadi Produk Pangan dan Pakan. *Pepadu, 1(1), 37–41.*

Repo-Carrasco, R., Espinoza, C., & Jacobsen, S. E. (2003). Nutritional value and use of the Andean corps quinoa (*Chenopodium quinoa*) and kañiwa (*Chenopodium pallidicaule*). *Food Reviews International, 19(1–2), 179–189*. https://doi.org/10.1081/FRI-120018884

Rowe, W. B. (2009). Principles of modern grinding technology (2nd ed.). *William Andrew Publishing.*

Sabanis, D., & Tzia, C. (2011). Effect of dietary fibre enrichment on selected properties of gluten-free bread. *Jurnal: LWT - Food Science and Technology, 44(3), 727–735.*

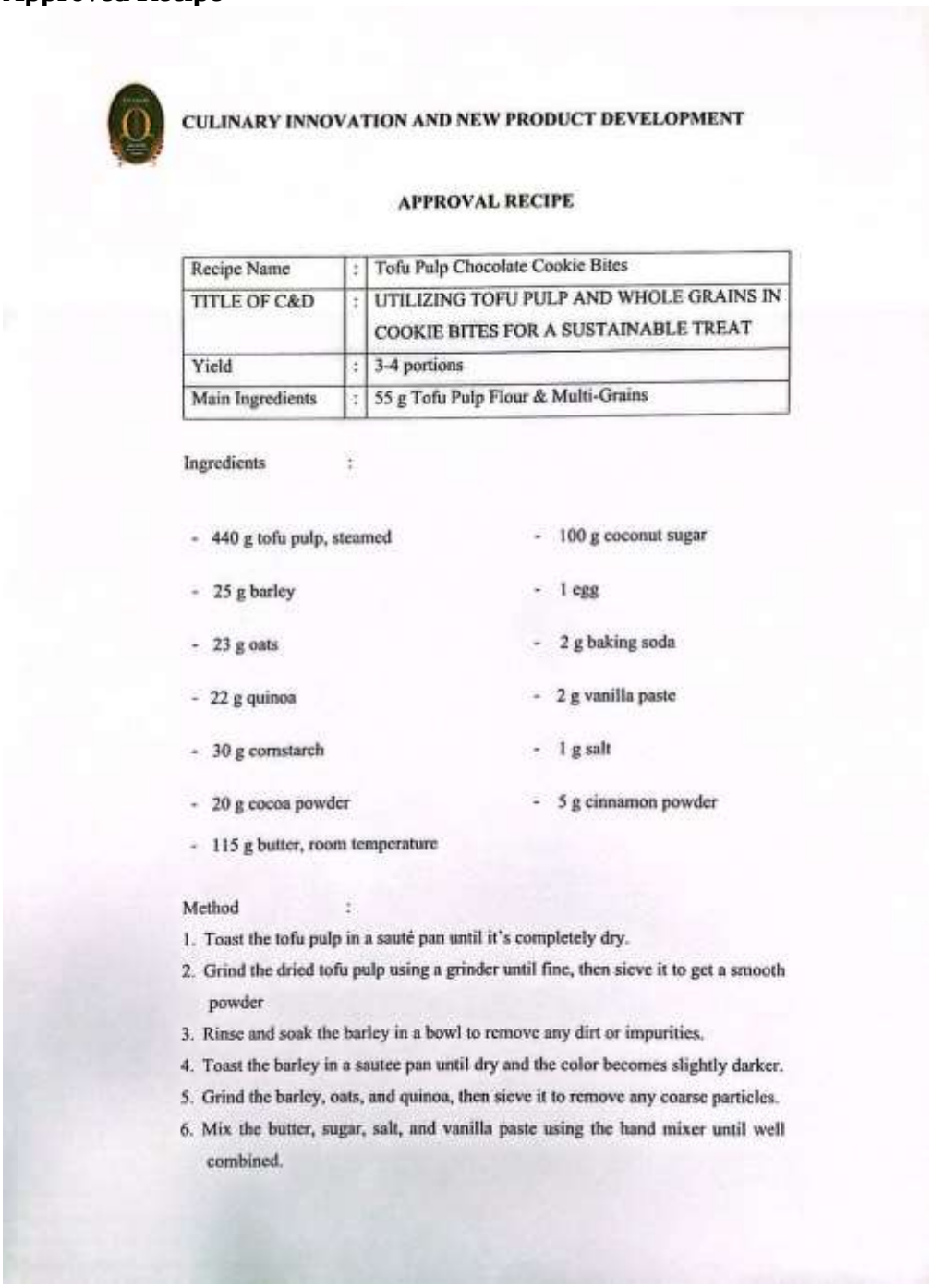
Vadukapuram, S. S., Bhat, K. K., & Babu, A. S. (2014). Effect of storage and packaging on the quality of cookies. *Journal of Food Science and Technology, 51(1), 198–202.* https://doi.org/10.1007/s13197-011-0495-8

Visioni, A., Basile, B., Amri, A., Sanchez-Garcia, M., & Corrado, G. (2023). Advancing the conservation and utilization of barley genetic resources: Insights into germplasm management and breeding for sustainable agriculture. *Plants, 12(18), 3186.* https://doi.org/10.3390/plants12183186

Yuliarti, O., Rasul, S., Albedwawi, H. M. S., & Tarique, M. (2024). Evaluation of low methoxyl pectin concentration and dough chilling treatment in enhancing okara-wheat flour-based cookies structure. *LWT, 213, 117052.* https://doi.org/10.1016/j.lwt.2024.117052

APPENDIX

1. Approved Recipe



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

APPROVAL RECIPE

Recipe Name	:	Tofu Pulp Chocolate Cookie Bites
TITLE OF C&D	:	UTILIZING TOFU PULP AND WHOLE GRAINS IN COOKIE BITES FOR A SUSTAINABLE TREAT
Yield	:	3-4 portions
Main Ingredients	:	55 g Tofu Pulp Flour & Multi-Grains

Ingredients :

- 440 g tofu pulp, steamed
- 25 g barley
- 23 g oats
- 22 g quinoa
- 30 g cornstarch
- 20 g cocoa powder
- 115 g butter, room temperature
- 100 g coconut sugar
- 1 egg
- 2 g baking soda
- 2 g vanilla paste
- 1 g salt
- 5 g cinnamon powder

Method :

1. Toast the tofu pulp in a sauté pan until it's completely dry.
2. Grind the dried tofu pulp using a grinder until fine, then sieve it to get a smooth powder
3. Rinse and soak the barley in a bowl to remove any dirt or impurities.
4. Toast the barley in a sautee pan until dry and the color becomes slightly darker.
5. Grind the barley, oats, and quinoa, then sieve it to remove any coarse particles.
6. Mix the butter, sugar, salt, and vanilla paste using the hand mixer until well combined.

7. Add the egg and mix again.
8. Add all the dry ingredients (tofu pulp flour, barley flour, oat flour, quinoa flour, cornstarch, cocoa powder, cinnamon powder, and baking soda) and mix it using a spatula.
9. Once the dough is formed, shaped it into small, flat circles.
10. Preheat the oven to 145 degrees.
11. Bake for 15-20 minutes using top and bottom heat.
12. Let the cookies cool completely, and they are ready to serve.

Product Description

Chocolate cookie bites are nutritious, bite-sized treats made from a blend of tofu pulp flour, barley flour, oat flour, quinoa flour, cornstarch, and cocoa powder. Sweetened with coconut sugar and enriched with butter and eggs, these cookies offer a rich chocolate flavor complemented by the warm, aromatic notes of cinnamon powder. While providing fiber and essential nutrients from whole grains and tofu pulp. Made with natural ingredients and free from artificial preservatives, these cookies are better-for-you snack that combines delicious taste with nourishing ingredients. This product also promotes sustainability by utilizing tofu pulp, helping to reduce food waste. With their delicious taste and nutritional benefits, chocolate cookie bites are an ideal snack for health-conscious and environmentally aware consumers. Enjoy them as the perfect snack for those seeking a delicious treat.

TRIAL PROGRESS

The trial aimed to develop Chocolate Cookie Bites using tofu pulp flour and whole grains flour while achieving the ideal texture and flavor. In Trial 1, mixing dry and wet ingredients separately with melted butter resulted in a dry, dense, and crumbly texture. Trial 2 I tried to add mashed banana, more milk, eggs, and butter, but the texture remained unsatisfactory. In Trial 3, I used the creaming method (mixing butter, sugar, and eggs before adding dry ingredients), increased butter and sugar, and removed milks. This improved the texture—crunchier and more flavorful,

though still not perfect. Next steps include refining the recipe, improve texture, and testing shelf stability.

TRIAL DOCUMENTATION

CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

Student Name : Caroline Calista Chandra

NIM : 2374130010021

Advisor	1st Examiner	2nd Examiner
Name: Filias Kusuma, S.E., M.M Date: 24 March 2025	Name: Heni Adhianata, S.TP., M.Sc Date: 29/8/2025	Name: Ryan Yeremia Iskandar, S.S. Date: 24/3/25

2. Approved Sensory

AKADEMI KULINER & PATISERI OTTIMMO® INTERNASIONAL

CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT SENSORY TEST

DATE : 24 April 2025

NAME : Caroline Calista Chandra

NIM : 2374130010021

PRODUCT : UTILIZING TOFU PULP AND WHOLE GRAINS IN COOKIE BITES FOR A SUSTAINABLE TREAT

ADVISOR : Filias Kusuma, S.E., M.M.

PANELIST	SIGHT	SMELL	TEXTURE	TASTE	OVERALL	TOTAL
Panelist 1	3	3	4	4	4	18
Panelist 2	5	5	5	5	5	25
Panelist 3	4	4	4	5	5	22
Panelist 4	4	4	2	3	3	16
Panelist 5	5	4	4	3	4	20
Panelist 6	4	4	3	4	4	19
Panelist 7	2	3	4	2	3	14
Panelist 8	3	4	4	3	3	17
Panelist 9	4	4	3	4	3	18
Panelist 10	4	5	4	4	4	21
TOTAL	38	40	37	37	38	**190**

NOTES :

1. all good, bentuk saja mungkin lebih diseragamkan
2. Sudah baik
3. Good
4. Good, but too grainy for me
5. Better dari sebelumnya. Aftertastenya masih sedikit terasa
6. Texture a bit grainy
7. bitter. too smooth penampilannya
8. Overall sudah okay
9. Better, but still dry and sandy
10. Okay

APPROVED

3. Consultation Form

Akademi Kuliner & Patiseri

OTTIMMO INTERNASIONAL

CONSULTATION FORM
CULINARY INNOVATION AND
NEW PRODUCT DEVELOPMENT

Name : Caroline Calista Chandra

Student Number : 2330133010021

Advisor : Fajar Kusuma, S.E, M.M

No	Date	Topic Consultation	Name/ Signature	Advisor Signature
1.	9/25	ide cetep CND		
2.	12/25	Rangkum Resep	Hadi/	
3.	14/25	Topic Consultation		
4.	17/25	konsultasi dan revisi proposal bab 1-3		
5.	18/25	ujian proposal CND		
6.	8/25	revisi bab 1-3		

No	Date	Topic Consultation	Name/ Signature	Advisor Signature
7.	8/25	revisi bab 1-3		
8.	28/25	konsultasi bab 4-5		
9.	12/25	konsultasi metodelogi penelitian dan bab 4-5		
10.	13/25	konsultasi bab 4-5		

4. Systematic Process Documentation

1) Toast the tofu pulp until it’s completely dry

2) Rinse and soak the barley, toast the barley until dry and slightly darker


3) Prepare all the main ingredients


4) Grind the tofu pulp and whole grains

5) Sieve the tofu pulp and whole grains to remove any coarse particles so its become fine powder


6) Prepare all the ingredients to make cookie bites

7) Mix the wet and dry ingredients


8) Shape and bake for 15-20 minutes at 145 degrees