

BIBLIOGRAPHY

- Aaslyng, M. D., & R. H. (2021). Introducing Tempeh as a New Plant-Based Protein Food Item on the Danish Market. *Foods*, 10(11), 2865.
- Ahnan-Winarso, A. D., L. C., F. G., J. G., & H. X. (2021). Tempeh: A semicentennial review on its health benefits, fermentation, safety, processing, sustainability, and affordability. *COMPREHENSIVE REVIEWS IN FOOD SCIENCE AND FOOD SAFETY*, Vol. 20(2), 1717-1767.
- Arham, Z., Kurniawan, L. A., & Ismaun. (2021). Spectroscopic Analysis of Tempeh Protein Content during the Production Process. *International Journal of Transdisciplinary Knowlegde*, 51-62.
- Buulolo, T., A. F., & Y. T. (2022). PENGARUH PENGGUNAAN LIMBAH CAIR AMPAS TAHU TERHADAP PERTUMBUHAN TANAMAN TERUNG UNGU (*Solanum melongena L.*). *TUNAS: Jurnal Pendidikan Biologi*, Vol. 3 No. 1, 1-14.
- Clarys, P., T. D., I. H., P. D., B. V., W. K., . . . P. M. (2014). Comparison of Nutritional Quality of the Vegan, Vegetarian, Semi-Vegetarian, Pesco-Vegetarian and Omnivorous Diet. *Nutrients*, Vol. 6(3), 1318-1332.
- Ghaani, M., C. C., G. C., & S. F. (2016). An overview of the intelligent packaging technologies in the food sector. *Trends in Food Science & Technology*, Vol. 51, 1-11.
- Hnin, K. K., M. Z., A. M., & Y. Z. (2019). Emerging food drying technologies with energy-saving characteristics: A review. *Drying Technology*, Vol. 37(12), 1465-1480.
- Huang, Y. C., B. W., Y. C., W. C., & M. W. (2018). Effects of Tempeh Fermentation with *Lactobacillus plantarum* and *Rhizopus oligosporus* on Streptozotocin-Induced Type II Diabetes Mellitus in Rats. *Nutrients*, 10(9), 1143.
- Husna, N. E., Asmawati, & G. S. (2014). DENDENG IKAN LEUBIEM (*Canthidermis maculatus*) DENGAN VARIASI METODE PEMBUATAN, JENIS GULA, DAN METODE PENGERINGAN. *Jurnal Teknologi dan Industri Pertanian Indonesia* Vol. 6(3).
- Ikhsan, M., Muhsin, & Patang. (2016). PENGARUH VARIASI SUHU PENGERING TERHADAP MUTU DENDENG IKAN LELE DUMBO (*Clarias gariepinus*). *Jurnal Pendidikan Teknologi Pertanian* Vol. 2, 114-122.

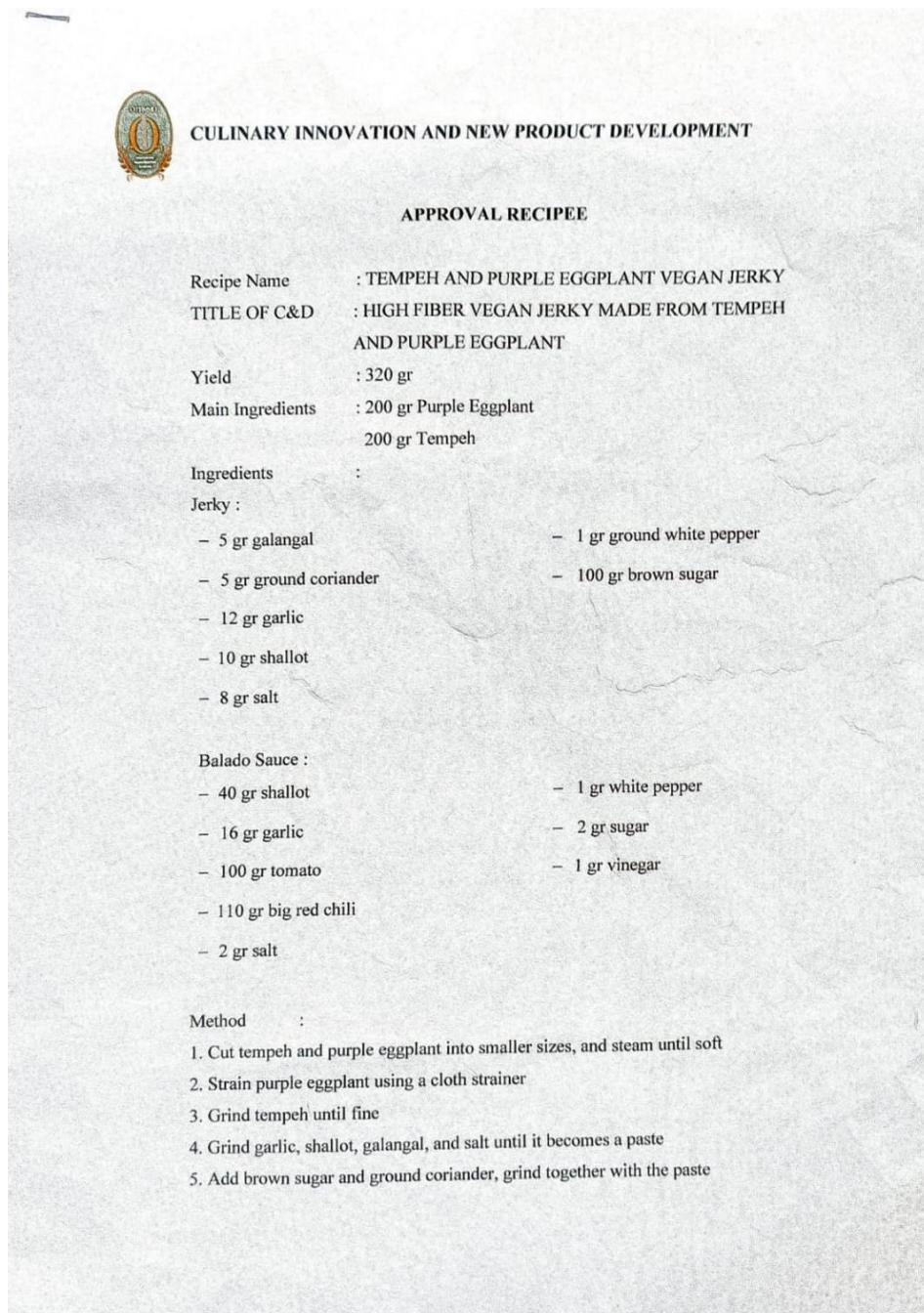
- Inyang, U., I. O., & B. E. (2017). Drying and the Different Techniques. *International Journal of Food Nutrition and Safety*, Vol. 8(1), 45-72.
- Janssen, M., C. B., M. R., & U. H. (2016). Motives of consumers following a vegan diet and their attitudes towards animal agriculture. *Appetite*, Vol. 105, 643-651.
- Juneja, V. K., M. V.-M., D. H., D. B., D. A., C.-A. H., . . . N. T.-O. (2016). Development of a predictive model for *Salmonella* spp. reduction in meat jerky product with temperature, potassium sorbate, pH, and water activity as controlling factors. *International Journal of Food Microbiology*, 1-8.
- Kemalawaty, M., C. A., & I. A. (2019). Kajian Pembuatan Dendeng Ayam Sayat dengan Penambahan Ekstrak Asam. *Jurnal Peternakan Sriwijaya* Vol. 8(1), 1-8.
- Kurniadi, O. J. (2017). *TEKNIK MEMASAK MASAKAN TRADISIONAL AEROFOOD CATERING SERVICE SITE RUMAH SAKIT DAERAH dr. SOEBANDI*. Jember: Universitas Jember.
- Li, M., H. W., G. Z., M. Q., M. L., L. S., . . . J. Z. (2014). Determining the drying degree and quality of chicken jerky by LF-NMR. *Journal of Food Engineering*, Vol. 139, 43-49.
- Liao, J., H. X., & J. L. (2022). Extraction of phenolics and anthocyanins from purple eggplant peels by multi-frequency ultrasound: Effects of different extraction factors and optimization using uniform design. *Ultrasonics Sonochemistry* Vol. 90, 106174.
- Luo, Y., L. Z., J. X., L. S., Z. J., R. S., & Y. J. (2020). Effect of fermentation and postcooking procedure on quality parameters and volatile compounds of beef jerky. *Food Science & Nutrition* Vol 8(5), 2316-2326.
- Marrone, G., C. G., D. P., P. L., A. M., F. D., & A. N. (2021). Vegan Diet Health Benefits in Metabolic Syndrome. *Nutrients*, Vol. 13(3), 817.
- Martini, S., A. C., A. C., & D. T. (2021). Domestic cooking methods affect the stability and bioaccessibility of dark purple eggplant (*Solanum melongena*) phenolic compounds. *Food Chemistry*, Vol. 341(2), 128928.
- Naeem, M. Y., & S. U. (2019). Nutritional Content and Health Benefits of Eggplant. *Turkish Journal of Agriculture -Food Science and Technology*, 7(3), 31-36.
- Nisa, A. (2023, Mei 5). *parapuan: Bukan Hanya Beda Warna, Apa Perbedaan Lain Terong Hijau dan Ungu?* Retrieved from Bobo.id Teman Bermain dan Belajar: <https://bobo.grid.id/read/083777279/bukan-hanya-beda-warna-apa-perbedaan-lain-terong-hijau-dan-ungu?page=all>

- Patil, A. R., Chogale, N. D., Pagarkar, A. U., Koli, J. M., Bhosale, B. P., Sharangdhar, S. T., . . . Kulkarni, G. N. (2020). VACUUM PACKAGING IS A TOOL FOR SHELF LIFE EXTENSION OF FISH PRODUCT : A REVIEW. *J. Exp. Zool. India Vol. 23, Supplement 1*, 807-810.
- Pilco, C. J., D. T., R. R., N. G., K. M., N. M., . . . F. B.-M. (2019). Analysis of protein, fiber content and amino acid profiles in Tempeh obtained by fermentation of beans (*Phaseolus vulgaris* L.) and quinoa (*Chenopodium quinoa*) with *Rhizopus oligosporus*. *EurAsian Journal of BioSciences, Vol. 13*, 1195-1199.
- Radita, R., S. A., K. N., W. A., & R. I. (2018). Firmicutes is the predominant bacteria in tempeh. *International Food Research Journal 25(6)*, 2313-2320.
- Rawat, S. (2015). Food Spoilage: Microorganisms and their prevention. *Asian Journal of Plant Science and Research, Vol. 5(4)*, 47-56.
- Rizal, S., M. K., A. S., & V. S. (2022). Changes of nutritional composition of tempeh during fermentation with the addition of *Saccharomyces cerevisiae*. *BIODIVERSITAS, Vol. 23(3)*, 1553-1559.
- Shi, S., B. K., Y. W., Q. L., & X. X. (2020). Comparison of the quality of beef jerky processed by traditional and modern drying methods from different districts in Inner Mongolia. *Meat Science 136*, 108080.
- Srinivasan, S., & W. L. (2014). Development of a Supporting Tool for Sustainable FMCG Packaging Designs. *Procedia CIRP 15*, 395-400.
- Teoh, S. Q., N. L., C. W., A. M., S. H., & J. J. (2024). A review on health benefits and processing of tempeh with outlines on its functional microbes. *Future Foods Vol. 9*, 100330.
- USDA Agricultural Research Service. (2019, April 1). *Limes, raw*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/168155/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Eggplant, raw*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/169228/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Garlic, raw*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/169230/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Oil, palm*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/171015/nutrients>

- USDA Agricultural Research Service. (2019, April 1). *Peppers, hot chili, red, raw*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/170106/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Salt, table*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/173468/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Shallots, raw*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE : <https://fdc.nal.usda.gov/fdc-app.html#/food-details/170499/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Spices, pepper, red or cayenne*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/170932/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Sugars, brown*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/168833/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Sugars, granulated*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/169655/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Tempeh*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/174272/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Tomatoes, red, ripe, raw, year round average*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/170457/nutrients>
- USDA Agricultural Research Service. (2019, April 1). *Vital wheat gluten*. Retrieved from U.S. DEPARTMENT OF AGRICULTURE: <https://fdc.nal.usda.gov/fdc-app.html#/food-details/168147/nutrients>

APPENDIX

1. Approval Recipe





CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

6. Mix well tempeh, purple eggplant, seasoning paste and white pepper
7. Flatten jerky dough on baking paper, oven for ±30 minutes 160°C
8. Rough grind all the sauce ingredients
9. Sauté ground ingredients with oil until fragrant
10. Toss the jerky in the sauce, and mix well

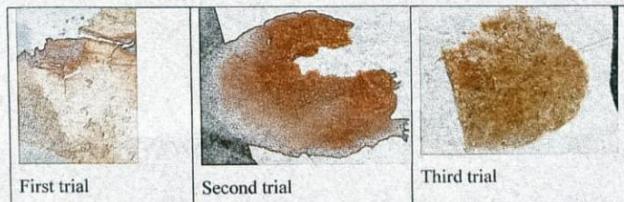
Product Description

Vegan jerky made from tempeh and purple eggplant, coated with balado sauce.
Higher in fiber than the normal beef jerky, and also low in cholesterol.

TRIAL PROGRESS (50 – 100 WORDS)

1. First trial, jerky was too thin, too crispy, a little bit burned, colour is too light and too dry. The taste is too salty and not too sweet. These may be affected by the oven temperature is too high and the use of too much tapioca flour.
2. Second trial, jerky colour is good. The edges are burned, but the centre is too soft. The taste is too sweet. These may be affected by baked too long, not using any flour, too thick and the size of jerky is too big.
3. Third trial, the taste is good. The texture is still too soft. These may be affected by the addition of oil.
4. Fourth trial, the taste is good. The texture is not too soft but also not too hard. The balado sauce taste is still not as expected.

TRIAL DOCUMENTATION





CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT



Student Name : Winna Tri Cahyani
NIM : 2274130010012

Advisor	1 st Examiner	2 nd Examiner
 Name: Heni Adiningsih Date: 28/3/2021	 Name: Johanna Date: 28/3/2021	 Name: Ryan Yeranta Date: 28/3/2021

2. Approved Sensory



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT SENSORY TEST

DATE : 17 April 2024
NAME : Winna Tri Cahyani
NIM : 2274130010012
PRODUCT : HIGH FIBER VEGAN JERKY MADE FROM TEMPEH AND PURPLE EGGPLANT
ADVISOR : Heni Adhianata, S.TP., M.Sc.

PANELIST	SIGHT	SMELL	TEXTURE	TASTE	OVERALL	TOTAL
Panelist 1	5	5	3	5	3	21
Panelist 2	4	4	1	4	3	16
Panelist 3	4	4	5	5	5	23
Panelist 4	4	5	2	4	4	19
Panelist 5	2	4	2	4	4	16
Panelist 6	5	5	1	5	4	20
Panelist 7	4	4	2	4	4	18
Panelist 8	4	4	2	2	4	16
Panelist 9	5	5	4	4	4	22
Panelist 10	4	5	2	4	4	19
TOTAL	41	45	24	41	39	190

NOTES :

1. terlalu lembek, kurang bertekstur
2. Texture is too mushy for it to be called a jerky
3. Sudah baik
4. Taste sudah sangat oke. Tekstur di buat lebih padat agar bisa lebih menyerupai daging.
5. Kurang gurih sedikit
6. Too soft
7. texture trll lembek
8. Terlalu lembek, basah, masih ada pahit sedikit dan cenderung manis
9. Good
10. -



3. Consultation Form

Akademi Kuliner & Patisserie OTTIMMO INTERNASIONAL CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT					
 <p>Academy of Culinary Arts and Pastry Arts CULINARY ARTS INNOVATION AND NEW PRODUCT DEVELOPMENT</p>					
No	Date	Topic Consultation	Name/ Signature	Advisor Signature	Name/ Signature
1.	13 / 3 2024	Penilaian Ingredien bahan kue terikku s. Prestasi 90%	Heni/ Randy	Heni/ Randy	Ning
2.	13 / 3 2024	Product Consultation	Clay Jery	Heni/ Randy	Heni/ Randy
3.	15 / 3 2024	Konsultasi Produk	Johanna		
4.					
5.	25 / 3 2024	Revisi proposal dari pengembang	Heni/ Randy	Heni/ Randy	Heni/ Randy
6.	27 / 3 2024	- Jadwal - formulasi resep - senyawa bahan trial ke-2	Randy	Heni/ Randy	Heni/ Randy
7.	27 / 5 2024	- PPT ujian proposal	Randy	Heni/ Randy	Heni/ Randy

No	Date	Topic Consultation	Name/ Signature	Advisor Signature	Name/ Signature
8.	5 / 7 2024	- Revisi proposal - Nutrisi - Packaging	Heni/ Randy	Heni/ Randy	Heni/ Randy
9.	11 / 7 2024	Product Consultation.			
10.	15 / 7 2024	Laporan Akhir dari Packaging aktif	Heni/ Randy	Heni/ Randy	Heni/ Randy

4. Systematic Process Documentation

