

BIBLIOGRAPHY

- Abdullah, S. N., Hassan, C.Z., Norlelawati, A., & Huda-Faujan, N. (2018). Physicochemical properties and consumer preference of imitation chicken nuggets produced from chickpea flour and textured vegetable protein. *International Food Research Journal*, 25(3), 1016-1025.
- Ahmed A, Akram Q, Naz W, Akhtar S, Amjad I & Ashraf M. (2022). Possible revolutionary substitute to wheat: a review on nutrient rich and healthy diet development by pseudo cereals. *Biological and Clinical Sciences Research Journal*, 2022, 1. <https://www.thepharmajournal.com/archives/2023/vol12issue7/PartAN/12-7-495-359.pdf>
- Aisa, H.A., Gao, Y., Yili, A., Ma, Q., Cheng, Z. (2019). Beneficial Role of Chickpea (*Cicer arietinum* L.) Functional Factors in the Intervention of Metabolic Syndrome and Diabetes Mellitus. In *Bioactive Food as Dietary Interventions for Diabetes*, 2nd ed.; Watson, R.R., Preedy, V.R., Eds.; Academic Press: Cambridge, MA, USA, pp. 615–627.
- Aizpurua-Iraola J, Abdeli A, Benhassine T, Calafell F & Comas D. (2023). Whole mitogenomes reveal that NW Africa has acted both as a source and a destination for multiple human movements. *Scientific Reports*. 2023;13(1):10395. <https://www.thepharmajournal.com/archives/2023/vol12issue7/PartAN/12-7-495-359.pdf>
- Aman, Ullah, Muhammad, Farooq, Abdul, Rehman, Mubshar, Hussan & Siddique Kadambot H. M. (2020) Zinc nutrition in chickpea (*Cicer arietinum*): a review. *Crop and Pasture Science* 71, 199-218. <https://doi.org/10.1071/CP19357>.
- Anggeraeni, Unisyah. (2018). *Multikulturalisme Makanan Indonesia*. Badan Pengembangan dan Pembinaan Bahasa, Kementerian Pendidikan dan Kebudayaan, 2018 vi; 53 hlm.; 21 cm. <https://core.ac.uk/download/pdf/227159291.pdf>.
- Astutik, Widia N. (2023). SEJARAH PERKEMBANGAN BUDAYA RIJSTTAFEL DI INDONESIA PASCA KOLONIALISME BELANDA TAHUN 1942-1950. <http://digilib.uinkhas.ac.id/27532/1/skripsi%20Nur%20Widia%20Astutik%20fix.pdf>.
- Avilés-Gaxiola, S., Chuck-Hernández, C., & Serna Saldívar, S. O. (2018). Inactivation methods of trypsin inhibitor in legumes: a review. *Journal of Food Science*, 83(1), 17-29. <https://doi.org/10.1111/1750-3841.13985>,
- Barber, T. M., Kabisch, S., Pfeiffer, A. F. H., & Weickert, M. O. (2020). The Health Benefits of Dietary Fibre. *Nutrients*, 12(10), 3209. <https://doi.org/10.3390/nu12103209>.
- Bera, Indrani, O'Sullivan, Michael, Flynn, Darragh & Denis C. Shields. (2023). "Relationship between Protein Digestibility and the Proteolysis of Legume Proteins during Seed Germination" *Molecules* 28, no. 7:

3204.<https://doi.org/10.3390/molecules28073204>.

- Bhagyawant, S. S., Narvekar, D. T., Gupta, N., Bhadkaria, A., Gautam, A. K., & Srivastava, N. (2019). Chickpea (*Cicer arietinum* L.) Lectin Exhibit Inhibition of ACE-I, α -amylase and α -glucosidase Activity. *Protein and peptide letters*, 26(7), 494–501. <https://doi.org/10.2174/0929866526666190327130037>.
- Boukid, Fatma. (2021). Plant-based meat analogues: from niche to mainstream. *European Food Research and Technology*. 247. 10.1007/s00217-020-03630-9.
- Chand J, Kumar P & Upadhyay H. (2021). Geographical Distribution of Various Crops like Cereals, Legumes, Oilseed, Vegetables, Fodder and Forages, Commercial Crop, Condiments and Species, Medical and Aromatic Plant: An Overviewn. 2021.<https://www.thepharmajournal.com/archives/2023/vol12issue7/PartAN/12-7-495-359.pdf>
- Cohen, I. S., Day, A. S., & Shaoul, R. (2019). Gluten in Celiac Disease- More or Less? . *Rambam Maimonides medical journal*, 10(1), e0007. <https://doi.org/10.5041/RMMJ.10360>
- Daftar Kandungan Gizi Bahan Makanan (DKGBM). (2019). Tempe.https://www.andrafarm.com/andra.php?i=daftar-usda&BK_HP=Laptop&kmakan=16114#AndraFarm
- Dida Bulbula, D., & Urga, K. (2018). Study on the effect of traditional processing methods on nutritional composition and anti-nutritional factors in chickpea (*Cicer arietinum*). *Cogent Food & Agriculture*, 4(1), 1422370. <https://doi.org/10.1080/23311932.2017.1422370>.
- Farooq, M., Ullah, A., Lee, D. J., Alghamdi, S. S., & Siddique, K. H. M. (2018). Desi chickpea genotypes tolerate drought stress better than kabuli types by modulating germination metabolism, trehalose accumulation, and carbon assimilation. *Plant physiology and biochemistry: PPB*, 126, 47–54. <https://doi.org/10.1016/j.plaphy.2018.02.020>.
- Grasso, N., Lynch, N., Arendt, E., O'Mahony, J. (2021). Chickpea protein ingredients: A review of composition, functionality, and applications. *Comprehensive review in food science and food safety*, Volume 21, Issue 1. Retrived from <https://doi.org/10.1111/1541-4337.12878>.
- Grossmann L. (2023). Structural properties of pea proteins (*Pisum sativum*) for sustainable food matrices. *Critical Reviews in Food Science and Nutrition*, 2023, 1-21.<https://www.thepharmajournal.com/archives/2023/vol12issue7/PartAN/12-7-495-359.pdf>
- Herrera A. C., & Gonzalez de Mejia, E. (2021). Feasibility of commercial breadmaking using chickpea as an ingredient: functional properties and potential health benefits. *Journal of Food Science*, 86(6), 2208- 2224. <https://doi.org/10.1111/1750-3841.15759>
- Irawan, Hendi, Santosa & Yusuf. (2023). SEJARAH PERKEMBANGAN MAKANAN INDONESIA DARI ABAD KE 10 HINGGA MASA PENDUDUKAN JEPANG. *JURNAL PENELITIAN SEJARAH DAN*

BUDAYA. 9. 113-136. 10.36424/jpsb. v9i1.364.

- Ismail BP, Senaratne-Lenagala L & Stube A, Brackenridge A. (2020). Protein demand: review of plant and animal proteins used in alternative protein product development and production. *Animal Frontiers*. 2020;10(4):53-63.<https://www.thepharmajournal.com/archives/2023/vol12issue7/Par tAN/12-7-495-359.pdf>
- Ismail, M., & Kucukoner, E. (2017). Falafel: A meal with full nutrition. *Food and Nutrition Sciences*, 8(11), 1022-1027.<https://www.scirp.org/journal/paperinformation.aspx?paperid=80589>.
- Itzlinger, A., Branchi, F., Elli, L., & Schumann, M. (2018). Gluten-Free Diet in Celiac Disease-Forever and for All Nutrients, 10(11), 1796. <https://doi.org/10.3390/nu10111796>
- Jukanti AK, Pathak R & Mushyam C. (2019). Cluster Bean [*Cyamopsis tetragonoloba* (L.) Taub] Breeding. *Advances in Plant Breeding Strategies: Legumes*. 2019; 7:113-149.<https://www.thepharmajournal.com/archives/2023/vol12issue7/Par tAN/12-7-495-359.pdf>
- Konstantina JK, Keppler AJ & Van Der G. (2021). Functionality of ingredients and additives in plant-based meat analogues. *Foods*, 2021, 10.<https://www.thepharmajournal.com/archives/2023/vol12issue7/Par tAN/12-7-495-359.pdf>
- Lago-Oliveira S, Rebolledo-Leiva R, Garofalo P, Moreira MT & González- García S. (2023). Environmental and economic benefits of wheat and chickpea crop rotation in the Mediterranean region of Apulia (Italy). *The Science of the Total Environment*. 2023;896(165124):165124.<https://www.thepharmajournal.com/archives/2023/vol12issue7/Par tAN/12-7-495-359.pdf>
- Majid D, Dar BN, Parveen S, Jabeen A, Allai FM & Sofi SA. (2020). Avocado. Antioxidants in Fruits: Properties and Health Benefits. 2020, 103-123.<https://www.thepharmajournal.com/archives/2023/vol12issue7/Par tAN/12-7-495-359.pdf>
- Mangena P. *Advances in Legume Research: Physiological Responses and Genetic Improvement for Stress Resistance*. Bentham Science Publishers. 2020, (Vol. 1).<https://www.thepharmajournal.com/archives/2023/vol12issue7/Par tAN/12-7-495-359.pdf>
- Patil, Nikhil. (2023). Chickpea protein: A comprehensive review on nutritional properties, processing, functionality, applications, and sustainable impact. *The Pharma Innovation Journal* 2023; 12(7): 3424-3434. <https://www.thepharmajournal.com>.
- Pimenta BV, Madrid RRM, Mathews PD, Riske KA, Loh W & Angelov B. Interaction of polyelectrolyte-shell cubosomes with serum albumin for triggering drug release in gastrointestinal cancer. *Journal of Materials Chemistry. B, Materials for Biology and Medicine*. 2023;11(11):2490-2503.<https://www.thepharmajournal.com/archives/2023/vol12issue7/Par tAN/12-7-495-359.pdf>

[tAN/12-7-495-359.pdf](#)

- Rafiansyah, Muhammad R. (2017). PENGEMBANGAN PRODUK INOVASI PERKEDEL DAN STEAK MENGGUNAKAN BAHAN PANGAN LOKAL KIMPUL. <http://eprints.uny.ac.id/60594/1/PA.pdf>.
- Rajnicová, Dana, Špaleková, Andrea, Gálová, Zdenka & Romanová, Kvetoslava. (2019). The protein profile of cereals, pseudocereals and legumes. https://www.researchgate.net/profile/Zdenka-Galova/publication/330728740_The_protein_profile_of_cereals_pseudocereals_and_legumes/links/5c517ba0299bf12be3ed468a/The-protein-profile-of-cereals-pseudocereals-and-legumes.pdf
- Rehman HM, Cooper JW, Lam HM & Yang SH. (2020). Legume biofortification is an underexploited strategy for combatting hidden hunger. *Plant, Cell & Environment*. 2019;42(1):52-70. <https://www.thepharmajournal.com/archives/2023/vol12issue7/Par>
[tAN/12-7-495-359.pdf](#)
- Romano A, Gallo V, Ferranti P & Masi P. Lentil flour: nutritional and technological properties, in vitro digestibility, and perspectives for use in the food industry. *Current Opinion in Food Science*. 2021; 40:157-167. <https://www.thepharmajournal.com/archives/2023/vol12issue7/Par>
[tAN/12-7-495-359.pdf](#)
- Sadaf, J., Bibi, A., Raza, S., Waseem, K., Jilani, M. S., & Ullah, G. (2013). Peanut butter incorporation as substitute for shortening in biscuits: composition and acceptability studies. *International Food Research Journal*, 20(5), 3243-4247.
- Shevkani, K., Singh, N., Chen, Y., Kaur, A., & Yu, L. (2019). Pulse proteins: secondary structure, functionality and applications. *Journal of food science and technology*, 56(6), 2787–2798. <https://doi.org/10.1007/s13197-019-03723-8>.
- Siddiqui, Sana. (2022). FOOD QUALITY CONTROL AND STUDY OF CRITICAL CONTROL POINTS ENSURING FOOD SAFETY. <https://uniselinus.co.uk/sites/default/files/2022-01/Sana-Siddiqui.pdf>
- Singh, Nisha., Jian, Priyanka., Ujwal, Megha. & Langyan, Sapna. (2022). Escalate protein plates from legumes for sustainable human nutrition. *Nutrition and Sustainable Diets* Vol. 9. <https://doi.org/10.3389/fnut.2022.977986>.
- Suhardi, D. (2019). Optimalisasi Keterampilan Pembuatan Kemasan Untuk Meningkatkan Pemasaran Produk Pada UKM Pembuat Tape Di Desa Cibeureum, Kab Kuningan. *Jurnal Pengabdian Masyarakat*, Vol 2, No 2, hal 116-128.
- Summo, C., Angelis, D., Ricciardi, L., Caponio, F., Lotti, C., Pavan, F., Pasqualone, A., (2019). Nutritional, physico-chemical and functional characterization of a global chickpea collection. *Journal of Food Composition and Analysis*, Volume 84, Retrieved from <https://doi.org/10.1016/j.jfca.2019.103306>.
- Soedirga, L. C., Matita, I. C., & Wijaya, T. E. (2020). Karakteristik fisikokimia tepung kembang kol hasil pengeringan dengan pengering kabinet dan oven.

- FaSTJurnal Sains dan Teknologi (Journal of Science and Technology), 4(2), 57-68. [file:///C:/Users/jihan/Downloads/5881-19841-1-PB%20\(2\).pdf](file:///C:/Users/jihan/Downloads/5881-19841-1-PB%20(2).pdf).
- Tabel Komposisi Pangan Indonesia (TKPI). (2019). Kacang arab, kering. https://www.andrafarm.com/_andra.php?_i=daftar-tkpi&BK_HP=Laptop&kmakan=CR001#AndraFarm
- Tabel Komposisi Pangan Indonesia (TKPI). (2019). Kentang, segar. https://www.andrafarm.com/_andra.php?_i=daftartkpi&BK_HP=Laptop&kmakan=CR001#AndraFarm
- U.S. DEPARTMENT OF AGRICULTURE.FOOD DATA CENTRAL RESEARCH. Retrieved from <https://fdc.nal.usda.gov/fdc-app.html#/>
- Windarti, D., & Saidi, I. A. (2021). Organoleptic Characteristics of Mustard Flour (Brassica Juncea L) Packaged in Polyethylene and Polypropylene Packaging, Karakteristik Organoleptik Tepung Sawi (Brassica Juncea L) yang Dikemas dalam Kemasan Polietilen dan Polipropilen. *Procedia of Engineering and Life Science Vol, 1(2)*.
- Windiany, R. A., dinda reza okky naWa, & Supriyono. (2023). AKULTURASI BUDAYA ETNIS BELANDA DALAM MAKANAN NUSANTARA PERKEDEL. *Jurnal Budaya Nusantara*, 6(1), 228–232. <https://doi.org/10.36456/b.nusantara.vol6.no1.a6508>.
- Yaver, E. (2022). Nutritional and textural properties and antioxidant activity of breads prepared from immature, mature, germinated, fermented and black chickpea flours. *National Libary of Medicine*, 102(15). <https://doi.org/10.1002/jsfa.12082>
- Zhou Y, Wigley J, Case MF, Coetsee C, Staver AC. Rooting depth as a key woody functional trait in savannas. *The New Phytologist*. 2020;227(5):1350-1361. <https://www.thepharmajournal.com/archives/2023/vol12issue7/ParatAN/12-7-495-359.pdf>

APPENDIX

1. Approved Recipe




- Recipe Name : Perkedel Chickpea
TITLE OF C&D : THE IMPLEMENTATION OF CHICKPEAS IN PERKEDEL USING
FRYING METHOD.
Yield : 120 grams
Main Ingredients : Chickpea
Equipment :
- 2 Strainer
- Scale spoon
- Spoon and fork
- Pot
- Pan
- 2 Medium bowl
Ingredients :
- 50 gr chickpea
- 5 gr chickpea flour
- 1 gr msg
- 1 gr salt
- 1 gr black pepper
- 2,5 gr corn starch
- 30 ml beaten egg
- 20 gr ground beef
- 10 ml water
- 1 egg
- Enough oil to deep fry
- Method :
1. Boil chickpea for 30 minutes
2. Chill the chickpea and blender it
3. Strain the chickpea
4. Add the seasoning, beaten egg, ground beef.
5. Sift the flour and corn starch

6. Shape the mixture into round shape and flatten it a bit
7. Beat the egg and add water
8. Coat the perkedel with egg and deep fry it
9. While its bubbling add a spoon of egg to top the perkedel
10. Deep fry until golden brown and strain it

RECIPE BACKGROUND

Chickpeas are a family of legumes that are quite widely sold in Indonesia, but the empowerment of this ingredient is still rarely found with this recipe, this is the empowerment of chickpeas as another food ingredient by implementing on perkedel, with this preliminary innovation it is hoped that there will be other innovations in the future. Chickpeas are legumes that are high in fiber so they can hold hunger longer than potatoes and chickpeas have a lot of vitamin and mineral content that is good for the body. Although the processing used may not be optimal, this innovation can provide inspiration or data for further innovation.

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 NIM : 2174130010048

1 st Advisor	2 nd Advisor	3 rd Advisor
		
Name: Ryan Yermia Iskandar, SS.	Name: Novi Indah Permata Sari, S.T., M.Sc	Name: Gilbert Yanuar Hadiwirawan, A.Md.Par.
Date:	Date:	Date:

2. Approved Sensory



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CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT SENSORY TEST

DATE : 24 May 2023
NAME : Fildzah Farah Najah
NIM : 2174130010048
PRODUCT : Perkedel chickpea
ADVISOR : Ryan Yeremia Iskandar, SS

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

NOTES :



3. Consultation Form



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CONSULTATION FORM
CULINARY INNOVATION AND
NEW PRODUCT DEVELOPMENT

No	Date	Topic Consultation	Name/ Signature
1	23/3/2023	Pengembangan produk	
2		Nutrition	
3	22/3	Recipe consult	
4	22/3	Consultation	
5	22/3/2023	Product	
6	3/8/2023	End	

Name :
 Student Number :
 Advisor :

No	Date	Topic Consultation	Name/ Signature
7	3/8/2023	Nutrition fact	
8	21/8/2023	Revisi	
9	23/8/2023	Pengembangan sbhm Pengkumrulan	
10	24/8/2023	Pengembangan atmhc	

4. Systematic process Documentation

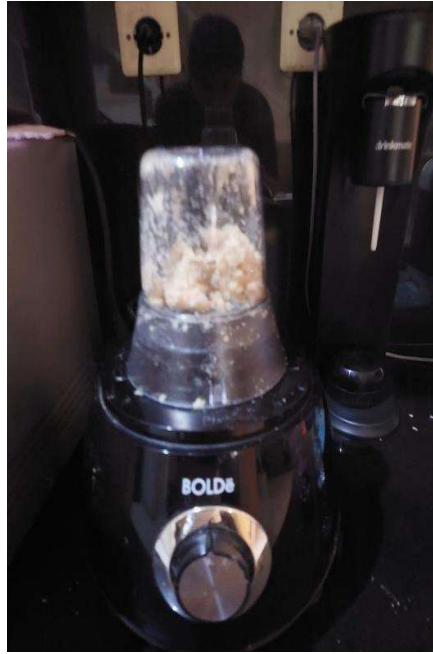
1) Soak dried chickpea for 12 hrs.



2) Boil for 20 mnts and strain it.



3) Blend it with blender.



4) Mix all ingredients.



5) Shape into form.



6) Coat the outer coating mixture



7) Deep fried the perkedel mixture.



8) Pour the outer coating, deep fried until golden brown.



9) Strain and perkedel chickpea are ready.

