



Effects of Red Bean Flour Substitution (*Phaseolus vulgaris* L.) On Making Sweet Kue Simpung On Physical Quality And Consumer Acceptability

Siti Habsohs

Jakarta State University, DKI Jakarta, Indonesia

Email: sitihabsoh29@gmail.com

Abstract

This study aims to study and analyze the effect of red bean flour substitution on the physical quality and acceptability of sweet kue simpung. This research was conducted at the Pastry and Bakery Processing Laboratory of the Culinary Education Program, State University of Jakarta. The study time is from February 2022 to January 2024. The method used in this study is experimental. The research sample used was sweet kue simpung substitution of red bean flour as much as 5%, 10% and 15%, then tested on 30 moderately trained panellists who assessed the entire aspect. Based on the results of statistical hypothesis tests using the Friedman test, it shows that there is no effect of red bean flour substitution on the acceptability of sweet kue simpung as much as 5%, 10%, and 15% in terms of colour, sweetness, red bean paste, savoury aroma, surface texture, and crispiness. Based on the results of the statistical hypothesis test, physical quality tests using the Anova test show that there is a real influence or difference in sweet kue simpung and red bean flour substitution on the physical quality of diameter as much as 5%, 10%, and 15% in making sweet kue simpung. Duncan's test showed that each treatment had a marked difference. The conclusion of this study is to recommend sweet kue simpung as much as 5% to be developed in the utilization of red bean flour.

Keywords: Sweet Kue simpung, Red Bean Flour, Substitution, Consumer Acceptability, Physical Quality

Introduction

Jogo beans, also known as red beans or arrowroot beans (*Phaseolus Vulgaris* L), have an oblong shape like a kidney (*kidney*) and are red, brown, or lyric (arrowroot beans) (Sunarzono, 2012). Red beans (*Phaseolus Vulgaris* L) come from America and are native to precisely the Tahuacan-Mexico valley area. For Indonesia, the largest red bean-producing areas and becoming the centre are West Java, Central Java, South Sulawesi, NTT, Bengkulu and Daerah Istimewa Yogyakarta. Red beans are easily found in traditional markets. The red bean production figure in Indonesia in 2018 was 67,876 tons (Statistics, 2018).

Based on statistics, red bean production in Indonesia is abundant, but in terms of its utilization, red beans are still very minimally processed by the community. People generally process red beans in a simple way, namely by boiling them into vegetable dishes or soup. To extend the shelf life of red beans (*Phaseolus Vulgaris L*), some people process them by drying and selling them in markets. Dried red beans are processed by the community for additional ingredients in making rendang and also MPASI. In addition to dried, red beans can also be processed simply into flour.

Flour is a solid particle in the form of fine grains that can be used for various purposes, both for research, household, and industrial raw materials (Ferianto, 2018). Red bean flour is a fine grain derived from red beans that are peeled, washed, soaked, boiled then dried and ground (Praptiningrum, 2015). After grinding the red beans and then sifted with a size 100 sieve *Mesh* in order to get a smooth texture like pre-existing flour. Red bean flour is very rich in protein and carbohydrates compared to other flours. In 100 grams of dried kidney beans there is energy of 369.35 kilocalories, protein of 22.85 grams, fat of 2.4 grams, carbohydrates of 64.15 grams, calcium of 502 mg, phosphorus of 429 mg, iron of 10.3 mg, and fiber of 4 grams (Mahmud et al., 2017). The manufacture of red bean flour encourages the emergence of diverse red bean processed products, and can be developed in new products as the ingredients become practical. In its development, red bean flour that is already practical and ready to use is still very little use in product processing. One of the products that will be applied with the use of red bean flour is sweet kue simping.

Kue Simping is one of the typical snacks of Purwakarta, West Java. Many kue simping are produced in Kaum village, Cipaisan Village, Purwakarta District, Purwakarta Regency. Simping itself means a flat round cracker, made from tapioca dough. Based on the main ingredient, tapioca flour, kue simping have the characteristics of crispy and crispy. The nutritional content of tapioca flour has a considerable energy of 363 cal per 100 grams. Tapioca flour is an alternative food for the community to solve the problem of meeting food needs and in the future can improve national food security. In addition, the ingredients used in making kue simping are coconut milk which can add a savory taste to the kue simping.

The technique of making kue simping is by roasting them on coals using a thick iron mold. Kue simping have two kinds of flavors, namely salty kue simping and sweet kue simping. Today there are many variations in taste and size. For example, sweet kue simping added with food flavors ranging from chocolate, milk, vanilla, jackfruit, durian, strawaberry and many more.

In this study, the modification of kue simping with the use of red bean flour as a substitute for making sweet kue simping aims to make red bean flour as an enhancer of taste and nutritional variations and to reduce the use or consumption of tapioca flour. At this time the use of red bean flour is very minimal in the community. So that with the research of red bean flour as a substitute for making sweet kue simping, it is expected to produce good

physical quality to produce colour, aroma, taste, texture and crispness that can be accepted by the community and have economic value.

Based on the background stated above, it is necessary to look at some problems that can be identified as follows; 1) There is an influence of red bean flour substitution on making sweet kue simpung on physical quality and consumer acceptability. 2) The technique of making red bean flour substitution sweet kue simpung is the same as kue simpung made from tapioca flour. 3) The composition of the formula for making red bean flour substitution sweet kue simpung. 4) The percentage of flour addition suitable for sweet kue simpung products. 5) Physical qualities of sweet kue simpung with red bean flour substitution.

The results obtained from this study are expected to be useful for 1) Extending the shelf life of red beans. 2) Obtain a good formula in the manufacture of red bean flour products. 3) Can be used as a reference or reference material for students of Universitas Negeri Jakarta in further research. 4) As input for the Culinary Engineering Study Program for Food Preservation, Food Ingredient Science, and Traditional Cake courses. 5) Introduce to the public about new red bean products that are durable in the form of flour and can be adjusted the amount to be consumed. In order not to depend on existing flour, namely tapioca flour.

Research Methods

This study used an experimental method, where researchers made sweet kue simpung substituting red bean flour. The experimental research is a causal research (cause and effect) whose proof is obtained through comparison / comparison (Jaedun, 2011). The experiment was carried out by substituting sweet kue simpung with red bean flour with a percentage of 5%, 10% and 15% respectively. To determine the quality of sweet kue simpung, red bean flour substitution will be carried out organoleptic tests and physical tests. Organoleptic test is a favorability test conducted on 30 panelists using five senses and physical test is a test of appearance characteristics on red bean flour substitution sweet kue simpung.

This study was conducted to test the level of width of red bean flour sweet kue simpung dough to determine the diameter of the ripe sweet kue simpung measured using a caliper. Ripe sweet kue simpung are calculated as the width value of the red bean flour sweet kue simpung dough. As for measuring the level of width of the kue simpung dough, it starts from measuring the diameter of the cooked kue simpung, and finally measuring the thickness of the ripe red bean flour kue simpung and data analysis.

In this red bean substitution sweet kue simpung study, the data analysis used is the anova analysis test which aims to determine the presence or absence of differences between many groups with a number of repetitions to become experimental units.

The data analysis for consumer acceptability used is the *Friedman test*. The *Friedman test* is a non-parametric test and the data is ordinal or *ranking*. This analysis aims to see the difference in influence between several samples.

Results and Discussion

Description of Physical Test of Sweet Kue Samping Substituted with Red Bean Flour

Physical quality tests are carried out by measuring the diameter and thickness of sweet kue samping substituted with red bean flour. The aspects assessed in the physical quality test can be seen in the following table.

Thickness

Based on the results of physical test thickness tests on sweet kue samping substitution of red bean flour 5%, 10% and 15% with 3 repetitions, the following data were obtained:

Table 1. Physical Test of Sweet Kue Samping Thickness

Assessment Aspect	Red Bean Flour Substitution Sweet Kue Samping Thickness (mm)				
	Deuteronomy	Standard	5%	10%	15%
Thickness	1	2,5	2,4	2,3	2,3
	2	2,8	2,3	2,6	2,4
	3	2,9	2,2	2,5	2,6
Sum		8,2	6,9	7,4	7,3
Mean		2,73	2,30	2,47	2,43
S.dev		0,21	0,10	0,15	0,15

The average percentage of the diameter of sweet kue samping substituted with red bean flour with 3 repetitions between 2.30%-2.47%. The highest percentage is in treatment 2 (10%) and the lowest percentage is in treatment 1 (5%)

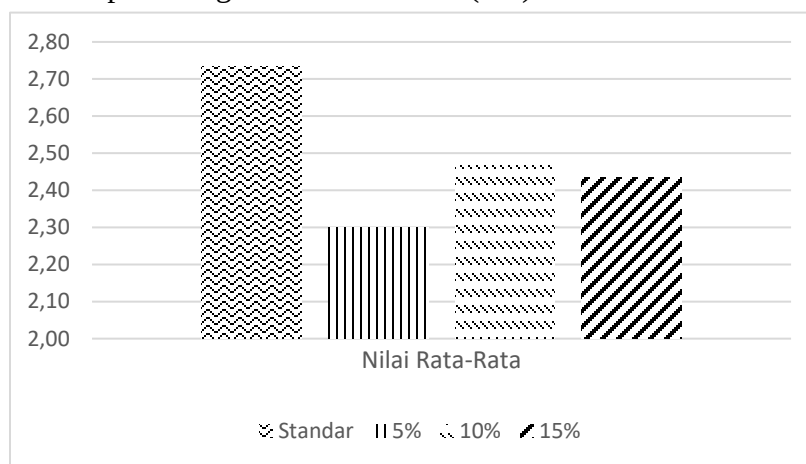


Figure 1.
Graph of the Average Value of Physical Test Thickness

Diameter

Based on the results of the physical test of diameter on sweet kue samping substitution of red bean flour 5%, 10% and 15% with 3 repetitions, the following data were obtained:

Table 4. 1 Physical Test of Sweet Kue Samping Diameter

Effects of Red Bean Flour Substitution
(*Phaseolus vulgaris L.*) On making sweet Kue Simpung on physical quality and consumer acceptability

Assessment Aspect	Red Bean Flour Substitution	Sweet Kue Simpung	Thickness (mm)		
	Deuteronomy	Standard	5%	10%	15%
Diameter	1	80,6	73,9	71,9	69,9
	2	76,3	72,1	72,5	69,3
	3	75,6	73,1	71	70,2
Sum		232,5	219,1	215,4	209,4
Mean		77,50	73,03	71,80	69,80
S.dev		2,71	0,90	0,75	0,46

The average percentage of the diameter of sweet kue simpung substituting red bean flour with 3 repetitions is between 69.80%-73.03%. The highest percentage is in treatment 1 (5%) and the lowest percentage is in treatment 3 (5%).

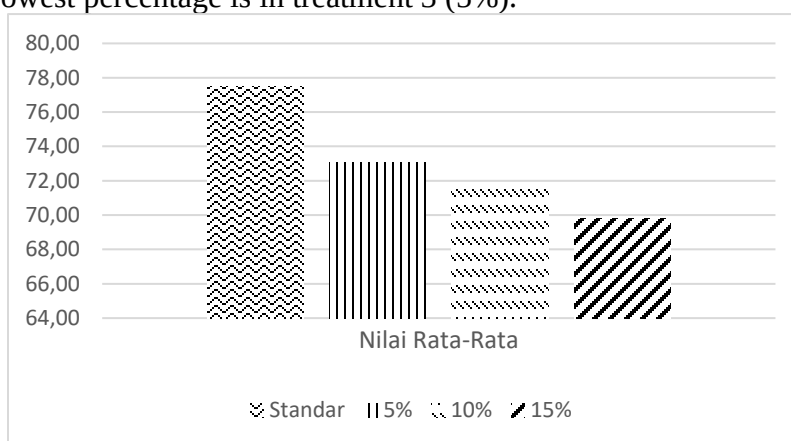


Figure 2.

Graph of the Average Value of Physical Test Diameter

Test Results Hypothesis Physical Test Analysis

Thickness Analysis Hypothesis Test Results

After normality and homogeneity tests, normal and homogeneous data results were obtained; Data analysis can be continued with the complete randomized design method or RAL Anova, which then obtained the following results:

Table 3. Hypothetical Results of Physical Test of Thickness with ANOVA test

SK	Db	JK	KT	Fcalculate	Ftabel
Treatment	2	0,05	0,02	1,24	5,14
Error	6	0,11	0,019		
Total	8	0,16	0,039		

Then the results of the thickness test are as follows:

Table 4. Results of the Thickness Physical Test Hypothesis

Judging Criteria	Fcalculate	Ftabel	Conclusion
Thickness	1,24	5,14	Fcalculate < Ftable then H0 is accepted

Based on the table data above, the $F_{\text{calculate}}$ calculation result was obtained at 1.24 with a signification level / $\alpha = 0.05$; treatment-free degree (DBP) 2 and error-free degree (dbg) 6 obtained F_{table} of 5.14. This shows that $F_{\text{hitung}} < F_{\text{table}}$ with H_0 is accepted. So there is no influence on the thickness of the sweet kue simping substitution of red bean flour.

Diameter Analysis Hypothesis Test Results

After the normality and homogeneity test was carried out, the results of the data were not normally distributed and homogeneous; Data analysis can be continued with the complete randomized design method or RAL Anova, which then obtained the following results:

Table 5. Results of Diameter Physical Test Hypothesis with Anova Test

SK	Db	JK	KT	$F_{\text{calculate}}$	F_{table}
Treatment	2	15,98	7,99	15,04	5,14
Error	6	3,19	0,53		
Total	8	19,17	8,52		

Then the results of the diameter test are as follows:

Table 6. Results of the Diameter Physical Test Hypothesis

Judging Criteria	$F_{\text{calculate}}$	F_{table}	Conclusion
Diameter	15,04	5,14	$F_{\text{calculate}} > F_{\text{table}}$ then H_0 is accepted

Based on the table data above, the $F_{\text{calculate}}$ calculation result was obtained at 15.04 with a signification level / $\alpha = 0.05$; Degree Free Treatment (DBP) 2 and Degree Free Error (dbg) 6 obtained F_{table} of 5.14. This shows that $F_{\text{hitung}} > F_{\text{table}}$ which means H_0 is rejected. That is, there is a real influence or difference in the diameter of the sweet kue simping substitution of red bean flour. Then it must be continued with the Duncan test to find out any differences between treatments.

Comparison of sorting between treatments with R_p value :

| P5-P10 | = 1.23 < 1.46 => No real difference

| P5-P15 | = 3.23 > 1.51 => Significantly different

| P10-P15 | = 2 > 1.46 => Significantly different

Information:

P5 = Sweet Kue Simping Treatment with 5% red bean flour substitution

P10 = Sweet Kue Simping Treatment with 10% red bean flour substitution

P15 = Sweet Kue Simping Treatment with 15% red bean flour substitution

Based on the results of Duncan's test on the diameter aspect, it is stated that P5 sweet kue simping (red bean flour substitution sweet kue simping percentage 5%) and P10 sweet kue simping (red bean flour substitution sweet kue simping percentage 10%) are not

significantly different. P5 sweet kue simpung (Red bean flour substitution sweet kue simpung percentage 5%) and sweet kue simpung P15 (red bean flour substitution sweet kue simpung percentage 15%) are markedly different. P10 sweet kue simpung (Red bean flour substitution sweet kue simpung percentage 10%) and sweet kue simpung P15 (red bean flour substitution sweet kue simpung percentage 15%) are markedly different. The diameter of the sweet kue simpung P5 (Red bean flour substitution sweet kue simpung percentage 5%) is the best product.

Consumer Acceptability Test Results

Based on the results of organoleptic testing, the colour aspect of sweet kue simpung can be accepted and liked by consumers. For the colour aspect, there is no significant difference in consumer acceptability between sweet kue simpung substituting red bean flour 5%, 10% and 15%. The colour produced between products is considered the same, this is because substituted red bean flour has a percentage not too far away and uses the same time at the time of roasting. Red bean flour substituted for sweet kue simpung has a yellowish-white colour, this is due to the use of peeled red bean flour which has a yellowish cream flour colour.

Based on the results of organoleptic testing, the savoury aroma aspect of sweet kue simpung can be accepted and liked by consumers. The savory aroma comes from coconut milk which is the main liquid ingredient in making sweet kue simpung. In the hypothesis test conducted on sweet kue simpung substitution of red bean flour 5 %, 10% and 15% there was no effect of aroma produced between products.

Based on the results of organoleptic testing on the sweetness aspect of sweet kue simpung, red bean flour substitution can be accepted and liked by consumers. In the hypothesis test conducted on sweet kue simpung substituting red bean flour 5 %, 10% and 15% there was no effect of sweetness produced between products, this was due to the use of the same formula in each product, and the taste of red beans tended to be neutral.

Based on the results of organoleptic testing, the taste aspect of red beans in sweet kue simpung, and red bean flour substitution can be accepted and liked by consumers. In the hypothesis test conducted on sweet kue simpung, red bean flour substitution did not have the effect of red bean flavour produced between products. This is because red bean flour is substituted not too much and the taste of red bean flour tends to be neutral.

Based on the results of organoleptic testing, the surface texture aspect of sweet kue simpung can be accepted and preferred by consumers. In the hypothesis test conducted on sweet kue simpung substitution of red bean flour, there was no influence on the surface texture produced between products. This is because the percentage of red bean flour used is not too far between treatments so the resulting surface texture is not much different. The higher the percentage of red bean flour substituted, the more the surface texture of the patterned red

bean flour sweet kue simping is formed. The motif of the sweet kue simping is formed due to the thickened dough due to the substitute of red bean flour.

Based on the results of organoleptic testing, the crispiness aspect of sweet kue simping substituted with red bean flour can be accepted and liked by consumers. In the hypothesis test conducted on sweet kue simping, red bean flour substitution did not have the effect of crispiness produced between products.

Conclusion

The results of research that have been conducted on sweet kue simping substituted with red bean flour 5%, 10% and 15% as many as three repetitions showed no significant influence or difference in the aspect of thickness but there was a real influence or difference in the aspect of diameter using the Anova test ($\alpha = 0.05$).

The results of red bean flour substitution in making sweet kue simping with a percentage of 5%, 10% and 15% produce a good formula. Descriptive data obtained from organoleptic tests conducted on 30 panellists rather trained including aspects of colour, savoury aroma, sweetness, red bean taste, surface texture and crispness are in the colour aspect with a percentage of 5% obtained an average value of 4.13, a percentage of 10% obtained a value of 4.40 and a percentage of 15% obtained a value of 4.03. In the savoury aroma aspect with a percentage of 5%, a value of 4.27 was obtained, a percentage of 10% obtained a value of 4.17 and a percentage of 15% obtained a value of 4.03. In the aspect of sweetness with a percentage of 5%, an average value of 4.20 was obtained, a percentage of 10% obtained a value of 3.97 and a percentage of 15% obtained a value of 3.87. In the aspect of red bean taste with a percentage of 5%, an average value of 4.20 was obtained, a percentage of 10% obtained a value of 4.03 and a percentage of 15% obtained a value of 3.97. In the aspect of surface texture with a percentage of 5%, an average value of 4.17 was obtained, a percentage of 10% obtained a value of 4.43 and a percentage of 15% obtained a value of 4.27. In the aspect of crispness with a percentage of 5%, an average value of 4.30 was obtained, a percentage of 10% obtained a value of 4.47 and a percentage of 15% obtained a value of 4.30.

The results of the Friedman test on aspects of colour, savoury aroma, sweetness, red bean taste, and surface texture with a level of significance ($\alpha = 0.05$) obtained no effect of red bean flour substitution on making sweet kue simping with a percentage of 5%, 10% and 15%.

It can be concluded that consumers give a good assessment of the innovation of red bean flour substitution for sweet kue simping. In this study, researchers recommended sweet kue simping substitution of red bean flour with a percentage of 5% so that it could be developed because it was widely preferred and optimized the use of red bean flour for product variations.

BIBLIOGRAPHY

- Alsuheindra, & Ridawati. (2008). *Principles of Nutritional Analysis and Organoleptic Assessment of Food Ingredients*. UNJ Press.
- Arbi, A. S. (2009). Introduction to sensory evaluation. *Sensory Evaluation Practicum*, 1–42.
- Broto, W., & Prabawati, S. (2008). *Processing technology for diversification of food consumption*. Centre for Agricultural Postharvest Research and Development, Agricultural Research and Development Agency.
- Cahyono, M. A., & Yuwono, S. S. (2014). The effect of the proportion of coconut milk and the duration of heating on the physico-chemical and organoleptic properties of instant hodgepodge seasoning [in Press July 2015]. *Journal of Food and Agroindustry*, 3(3), 1095–1106.
- Fauziyah, A., Marliyati, S. A., & Kustiyah, L. (2017). Red Bean Flour Substitution Increases the Nutritional Content, Dietary Fiber, and Antioxidant Capacity of Sorghum Analog Rice. *Journal of Nutrition and Food*, 12(2), 147–152. <https://doi.org/10.25182/jgp.2017.12.2.147-152>
- Feryanto, A. (2018). *Making flour is simple*. From Competency Partners.
- Gisslen, W. (2013). Professional Baking, 6th Edition. In *Wiley & Sons, Inc., Hoboken, New Jersey* (Seventh). file:///C:/Users/qeers/Downloads/DIPLOMA UITM PENANG/HTP162/A Professional baking.pdf
- Heri Suseno, S., Suptijah, P., & Sri Wahyuni, D. (2004). Fishery Product Technology Bulletin The Effect of Adding Nilem Fish Moss Meat (*Osteochilus hasselti*) on Making Scalps as Snack Food.
- Ilyasa, N. M. R., & Izzati, N. (2022). Simpung Kaum in the Historical Aspect of Cultural Values and Local Wisdom of The Sunda Muslim Community of Purwakarta Simpung Kaum in the Historical Aspect of Cultural Values and Local Wisdom of The Sunda Muslim Community of Purwakarta.
- Istiqomah, A., & Rustanti, N. (2015). Glycemic index, glycemic load, protein content, fiber, and favorability level of arrowroot flour pastries with red bean flour substitution.
- Jaedun, A. (2011). By : Amat Jaedun. *Experimental Research Methodology*, 0–12.
- Jayanti, E. P., Andriani, S., & Ratnasari, D. (2018). *Making Herbal Scalpings from Beluntas Leaves (Plucea Indica (L) Less) for Health Care*.
- KBBI. (2023a). *Daya*. KBBI. [HTTPS://kbbi.kemdikbud.go.id/entry/daya](https://kbbi.kemdikbud.go.id/entry/daya)
- KBBI. (2023b). *Diameter*. KBBI. <https://kbbi.kemdikbud.go.id/entri/diameter>
- KBBI. (2023c). *Consumers*. KBBI. <https://kbbi.kemdikbud.go.id/entri/konsumen>
- KBBI. (2023d). *Terima*. KBBI. <https://kbbi.kemdikbud.go.id/entri/terima>
- Kusmawati, A. (2000). *Basics of Agricultural Product Processing Process*. Central Grafika.
- Kusnan, M. R. (2011). *Various Flours and How to Make Them*. Marago Borneo Tarigas.
- Mahmud, M. K., Hermana, H., Nazarina, Marudut, M., & Aria, Z. N. (2017). *Table of Food Composition of Indonesia*. <http://repo.stikesperintis.ac.id/1110/1/32> Food Composition Table Indonesia.pdf
- Mamuaja, C. F. (2016). Quality control and food safety. In *Unsrat Press*.
- Mankotia, K., & Modgil, R. (2003). Effect of Soaking Sprouting and Cooking on Physico-Chemical Properties of Moth Beans (*Vigna aconitifolia*) . *Journal of Human*

- Ecology*, 14(4), 297–299. <https://doi.org/10.1080/09709274.2003.11905627>
- Mariani, Fadiati, A., & Artanti, G. D. (2013). *Report on the results of research on optimizing the use of vegetable flour and porridge of animal food ingredients from fisheries in making salted kue simping as healthy snacks for children*. http://sipeg.unj.ac.id/repository/upload/laporan/Laporan_Penelitian_2013_Otomalisasi_Pemanfaatan_Tepung_Sayuran_dan_bubur_bahan_Makanan_Hewani_Hasil_Perikanan_Pada_Pembuatan_Kue_Siimping_Asin_Sebagai_Jajajan_Sehat_bagi_Anak.pdf
- Mubarak, A. E. (2005). Nutritional composition and antinutritional factors of mung bean seeds (*Phaseolus aureus*) as affected by some home traditional processes. *Food Chemistry*, 89(4), 489–495. <https://doi.org/10.1016/j.foodchem.2004.01.007>
- Nazilla, Q. (2019). *The Effect of the Percentage of Addition of Rebon Shrimp Flour (Mysis relicta) on the Making of Kue simping on Consumer Acceptance*.
- Nurani, A. S., Subekti, S., & Ana. (2016). West Java Snack Mapping based on Snack Types, Main Ingredients, and Processing Techniques. *IOP Conference Series: Materials Science and Engineering*, 128(1). <https://doi.org/10.1088/1757-899X/128/1/012051>
- Nurlinda Sari, L., Sahariah Rowa, S., Fatmawaty Suaib, H., Department of Nutrition, A., Health Ministry of Health Makassar, P., Nutrition, J., & Health Ministry of Health, P. (2019). Acceptability and Macronutrient Content of Red Bean Flour and Taro Flour Substitution Biscuits. In *Food Nutrition Media* (Vol. 26).
- Pangastuti, H. A., Affandi, D. R., & Ishartani, D. (2013). Characterization of physical and chemical properties of red bean flour (*Phaseolus vulgaris* L.) With Some Preliminary Treatment Physical And Chemical Properties Characterization Of Red Kidney Bean (*Phaseolus vulgaris* L.) Flour By Some Processing Treatment. *Journal of Food Technology*, 2(1). www.ilmupangan.fp.uns.ac.id
- Officer, D. (2013). *Consumer acceptance of salted kue simping with the addition of selar fish porridge (selaroides leptolepis), anchovies (stolephorus sp), and shrimp shell heads* (Thesis). Jakarta State University.
- Praptiningrum, W. (2015). Experiment in Making Red Bean Flour Butter Cookies Wheat Flour Substitution. In *Thesis*. Semarang State University.
- Purveyor, p. r. k. (2018). *Olh-olh suppliers*. Portal Resmi Kabupten Supplier. [Hatsp://previous.gov.id/read/130](https://previous.gov.id/read/130)
- Rahman, N., Fitriyasyah, S. I., & Jayadi, Y. I. (2017). *Textbook of Food Science*. Blue Ocean CV.
- Rohadi. (2009). *Physical Properties of Materials and Their Application in the Food Industry*. Semarang University Press.
- Rukmana, H. R. (2014). *Successful Cultivation of Various Vegetable Nuts in the Yard and Plantation*. Lily Publisher.
- Rusiyanto, Soesilowati, E., & Jumaeri. (2013). Strengthening the national salt industry through improved cultivation technology and product diversification. *Scientific-: Journal of Science and Technology*, 11(2), 129–142.
- Sari, G. P. unj. ac. id/repository/upload/report/Laporan_Penelitian_2013_Otomalisasi_Pemanfaatan_Tepung_Sayuran_dan_bubur_bahan_Makanan_Hewani_Hasil_Perikanan_Pada_Pembuatan_Kue_Siimping_Asin_Sebagai_Jajajan_Sehat_bagi_Anak.pdf. (2017). *THE*

- EFFECT OF THE ADDITION OF RICA-RICA SPICE ON THE ACCEPTABILITY OF SAVORY KUE SIMPING OF WHITE GLUTINOUS RICE (Oryza sativa glutinosa)* This thesis is prepared to meet one of the requirements in obtaining a Bachelor of Education degree CULINARY EDUCATION STUDY PROGRAM.
[http://repository.unj.ac.id/30361/1/SKRIPSI GALUH PS.pdf](http://repository.unj.ac.id/30361/1/SKRIPSI%20GALUH%20PS.pdf)
- Setyaningsih, D., Apriyanto, A., & Maya Puspita Sari. (2010). *Sensory Analysis : For the Food and Meter Industry*. IPB Press.
- Shilla. (2021). *Red Bean Cultivation and Its Business Opportunities*. Elementa Media.
- Soekopitojo, S. (2010). *Coconut Milk functionality*.
- Statistics, B. P. (2018). *B*.
- Sunarzon, yes. (2012). *Kakang Sayur*. To the taste of penebara.
- Utomo, D., Wahyuni, R., & Wiyono, R. (2011). Utilization of snakehead fish (*Ophiocephalus striatus*) into meatballs in order to improve community nutrition and efforts to increase its economic value. *Food Technology : Scientific Information and Communication Media Agricultural Technology*, 1(1), 38–55.
<https://doi.org/10.35891/tp.v1i1.476>
- Verawati. (2015). The Effect of Red Bean Flour Substitution on Pie Skin Quality. *Block Caving – A Viable Alternative?*, 21(1), 1–9.
- Wicaksono, T. (2006). *Mari Bertanam Buncis*. Loka Aksara.
- Widiawati, D., Giovani, S., & Liana, S. P. (2022). Formulation and Characterization of High Fiber Red Bean Flour Substitution Dry Noodles. *Journal of Al-Azhar Indonesia Science and Technology Series*, 7(2), 80. <https://doi.org/10.36722/sst.v7i2.1114>
- Yasa Boga. (2015). *Indonesian Pastry*. Gramedia Main Library.

Arikunto Suharsimi (2016). *Research Procedure A Practical Approach*. Jakarta: PT Rineka Cipta.

Rukiyah, A.Y., & Yulianti, Lia. (2014). *Obstetric Care of Pregnancy Based on Competency-Based Curriculum*. East Jakarta: CV. Trans Info Media

Libraries in the form of scientific journals

Rohmawati, L. (2019). The Influence of Women Supervisors and Directors on Bank Risk with CEO Power as a Variable Volatility (Indonesian Commercial Bank Study). *Syntax Literate; Indonesian Scientific Journal*, 4(9), 26-42.

Ayoib, C.A., & Nosakhare, P.O (2015). Directors culture and environmental disclosure practice of companies in Malaysia. *International Journal of Business Technopreneurship*, 5(1), 99-114

Library in the form of Seminar Proceedings

Roeva, O (2012). Real-World Applications of Genetic Algorithm. In International Conference on Chemical and Material Engineering. Semarang, Indonesia: Department of Chemical Engineering, Diponegoro University

Literature in the form of a dissertation / thesis / thesis

Hermanto, B. (2012). The Effect of Trainin's Achievement, Motivation and Working Period of Technicians on Technician Productivity in Nissan Workshops Yogyakarta, Solo, and Semarang. Thesis. Yogyakarta State University

Book Differentiation Patent

Primack, H.S. (1983). Method of Stabilizing Polyvalent Metal Solutions. US Patent No. 4,373,104.

Copyright holder:

Sid Habsloh (2024)

First publication right:

Advances in Social Humanities Research

This article is licensed under:

