

BIBLIOGRAPHY

- Adeleke, B. S., & Babalola, O. O. (2020). Oilseed crop sunflower (*Helianthus annuus*) as a source of food: Nutritional and health benefits. *Food Science & Nutrition*, 8(9), 4666-4684.
- Aishwarya, S., & Anisha, V. (2014). Nutritional composition of sunflower seeds flour and nutritive value of products prepared by incorporating sunflower seeds flour. *International Journal of Pharmaceutical Research & Allied Sciences*, 3(3), 45-49.
- Akbar, T., Yusriana, Y., & Rohaya, S. (2019). Penentuan Umur Simpan Bumbu Masam Keueng Kering Instan Dengan Menggunakan Metode Acelerate Shelf Life Test (ASLT) Model Arrhenius. *Jurnal Ilmiah Mahasiswa Pertanian*, 4(4), 319-328. doi:<https://doi.org/10.17969/jimfp.v4i4.12825>
- Amelia, I. N. A. (2020). PERBANDINGAN KUALITAS MINYAK BIJI BUNGA MATAHARI DAN MINYAK KELAPA SAWIT BERDASARKAN ASAM LEMAK BEBAS DAN TINJAUANNYA MENURUT PANDANGAN ISLAM (Doctoral dissertation, Universitas YARSI).
- Astuti, R. M., Palupi, N. S., & Zakaria, F. R. (2018). Quality performance of protein allergen isolates for allergy diagnostic test (Case: Indonesian soybeans (*Glycine max*) and peanuts (*Arachis hypogaea*)). *International Food Research Journal*, 25(1), 217-226.
- Bravo, L. G. (2022). Anaphylaxis to Sunflower Seed with Tolerance to Other Nuts. The Role of Lipophilic Allergens. *J Investig Allergol Clin Immunol*, 32(1).
- Calín-Sánchez, Á., Lipan, L., Cano-Lamadrid, M., Kharaghani, A., Masztalerz, K., Carbonell-Barrachina, Á. A., & Figiel, A. (2020). Comparison of traditional and novel drying techniques and its effect on quality of fruits, vegetables and aromatic herbs. *Foods*, 9(9), 1261. <https://doi.org/10.3390/foods9091261>
- Chalid, S. Y., Zakaria-Rungkat, F., Syah, D., & Giriwono, P. E. (2020). Sensitivitas Ekstrak Protein Kacang Tanah (*Arachis hypogaea L.*) sebagai Larutan Uji Tusuk Kulit. *Warta IHP*, 37(2), 124-132.
- Dangal, Anish & Tahergorabi, Reza & Acharya, Dev & Timsina, Prekshya & Rai, Kishor & Dahal, Sangam & Acharya, Priti & Giuffrè, Angelo. (2024). Review on deep-fat fried foods: physical and chemical attributes, and consequences of high consumption. *European Food Research and Technology*. 250. 1-14. 10.1007/s00217-024-04482-3.

- Deshwal, G. K., Panjagari, N. R., & Alam, T. (2019). An overview of paper and paper based food packaging materials: health safety and environmental concerns. *Journal of food science and technology*, 56, 4391-4403.
- Guo, S., Na Jom, K., & Ge, Y. (2019). Influence of roasting condition on flavor profile of sunflower seeds: A flavoromics approach. *Scientific Reports*, 9(1), 11295.
- Inyang, U., Oboh, I., & Etuk, B. (2017). Drying and the different techniques. *International Journal of Food Nutrition and Safety*, 8(1), 45-72.
- Jithender, B., Upendar, N. K., & Rathod, P. J. (2019). Nutritional and anti-nutritional factors present in oil seeds: an overview. *Int. J. Conserv. Sci*, 7(6), 1159-1165.
- Jung, H., Lee, Y. J., & Yoon, W. B. (2018). Effect of moisture content on the grinding process and powder properties in food: A review. *Processes*, 6(6), 69.
- Khalid, M. Y., & Arif, Z. U. (2022). Novel biopolymer-based sustainable composites for food packaging applications: A narrative review. *Food Packaging and Shelf Life*, 33, 100892.
- Valdés García, A., Beltrán Sanahuja, A., Karabagias, I. K., Badeka, A., Kontominas, M. G., & Garrigós, M. C. (2021). Effect of frying and roasting processes on the oxidative stability of sunflower seeds (*Helianthus annuus*) under normal and accelerated storage conditions. *Foods*, 10(5), 944.
- Zaghi, A. N., Barbalho, S. M., Guiguer, E. L., & Otoboni, A. M. (2019). Frying process: From conventional to air frying technology. *Food Reviews International*, 35(8), 763-777.

APPENDIX

1. Approved recipe



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

APPROVAL RECIPE

Recipe Name : NON-PEANUT SAUCE BLOCK
TITLE OF C&D : UTILIZATION OF SUNFLOWER SEED AS A SUBSTITUTE INGREDIENT FOR PEANUT SAUCE
Yield : 2 PORTION
Main Ingredients : 100 GRAMS OF SUNFLOWER SEEDS
Ingredients :
- 100 gr sunflower seeds - 100 ml water
- 30 gr garlic - 20 gr palm sugar
- 40 gr shallots - 5 gr salt
- 50 gr curly red chillies
- 100 ml cooking oil

Method :

1. fry the sunflower seeds until golden and fragrant
2. use the same oil to fry the garlic shallots and red chillies.
3. blend the sunflower and spices until forms a rough paste
4. continue to cook until reduce and thickens
5. transfer to mold, and let set and dry in the dehydrator

Product Description

Sunflower seed sauce block is a peanut like-sauce that is made using sunflower as the main ingredient as the substitute of peanuts. This sauce is the perfect substitute for people with peanut allergies that want to enjoy various Indonesian dishes that include peanut sauce. Sunflower Seed has a nutty taste, especially by roasting or frying it , it creates a similar taste to peanuts in general. Sunflower seed also has a



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT

superior nutrition content in Vitamin C, Iron, Vitamin B6, and Magnesium compared to peanuts. this sauce block is a base for all types of sauce, just add the spices and seasoning to your needs. it is in a compact block form, for a easy use and convenient storing.

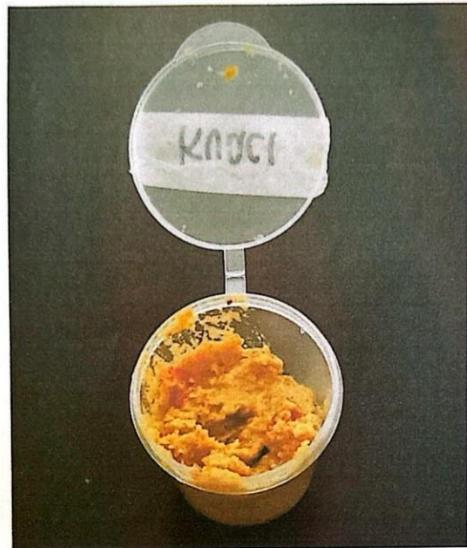
TRIAL PROGRESS

The result obtained after conducting the first trial of the product "NON-PEANUT SAUCE BLOCK " was that the form of the product produced was not as desired, the sauce still needs to be dryer and thicker to become a block. The spices are present, not too strong or mild to have it as a base sauce. but the taste is nutty enough, and the texture is creamy and grainy enough to mimic peanut sauce.

TRIAL DOCUMENTATION



CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT



Student Name : Melissa Rebecca Vania
NIM : 2174130010055

Advisor	1 st Examiner	2 nd Examiner
 Name: Gilbert Yanuar Hadi Wirawan, A.Md. Par. Date: 27 maret 2024	 Name: Heni Adhianata, S.TP.,M.Sc. Date: 27 maret 2024	 Name: Michael Valent, A.Md. Par. Date: 27 maret 2024

2. Approved sensory



Akademi Kuliner & Patiseri
OTTIMMO
 INTERNASIONAL

DATE : 22 April 2024

NAME : Melissa Rebecca Vania

NIM : 2274130010055

PRODUCT : UTILIZATION OF SUNFLOWER SEED AS A SUBSTITUTE
 INGREDIENT FOR PEANUT SAUCE

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

CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT SENSORY TEST

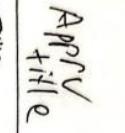
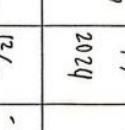
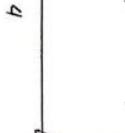
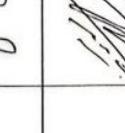
PANELIST	SIGHT	SMELL	TEXTURE	TASTE	OVERALL	TOTAL
Panelist 1	5	3	4	4	4	20
Panelist 2	4	4	4	4	4	20
Panelist 3	5	5	5	5	5	25
Panelist 4	4	4	4	4	4	20
Panelist 5	4	2	4	2	4	16
Panelist 6	4	3	4	3	3	17
Panelist 7	4	4	4	2	3	17
Panelist 8	4	4	4	4	4	20
Panelist 9	4	4	4	4	4	20
Panelist 10	4	4	4	4	4	20
TOTAL	42	37	41	36	39	195

NOTES :

1. aromanya kurang enak
2. Nicely done!
3. all good
4. Rasa kuaci sudah dominan, cuman masih ada aftertaste langu. Overall is okay.
5. Flavor kacangnya sangat kuat, ada after taste pahit
6. Needs more flavor. Especially flavor from the toasted seed
7. Bisa di perbaiki di bagian rasa
8. Sudah oke
9. –
10. Nice



3. Consultation form

CONSULTATION FORM CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT					
OTTIMMO INTERNATIONAL		Akademi Kuliner & Patiseri			
		Ottimo Culinary Arts Community Building Healthy Lives			
No	Date	Topic Consultation	Name/ Signature	Advisor	Signature
1	27/5 2024	Approval - Title - Product Innovation	Bilal Yanuar	Michael Velent	
2	27/5 2024	Approval signature Recipe	Michael Velent	Heini	
3	27/5 2024	Simplification	Michael Velent		
4	9/7 2024	Simple Life	Michael Velent		
5	9/7 2024	Suggestions	Michael Velent		
6	10/7 2024	- cost etc.	Michael Velent		
No	Date	Topic Consultation	Name/ Signature	Advisor	Signature
7	10/7 2024	- Cost	Michael Velent		
8	12/7 2024	- Sab 4			
9	12/7 2024	- Sab 5			
10	12/7 2024	Conclusion	Michael Velent		

4. Systematic Process Documentation

1) Ingredients of Non-Peanut Sauce



2) Frying the seeds



3) Frying the aromatics



4) Grinding



5) Paste



6) drying

