

RESEARCH AND DEVELOPMENT FINAL PROJECT

PLANT-BASED TEKWAN SOUP



By

LAURENZ ALAN RICARDO SUGIANTO

2074130010013

STUDY PROGRAM OF CULINARY ART

OTTIMMO INTERNATIONAL

MASTERGOURMET ACADEMY

SURABAYA

2022

PLAGIARISM STATEMENT

I certify that this report is my own work, based on my personal study and/or research and that I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication. I also certify that this report has not previously been submitted for assessment in any other unit, except where specific permission has been granted from all unit coordinators involved, or at any other time in this unit, and that I have not copied in part or whole or otherwise plagiarised the work of other students and/or person.

With this statement, I am ready to bear the risk/any sanctions imposed to me in accordance with applicable regulations, if in the future there is a breach of scientific ethics, or there is a claim against the authenticity of my work

Surabaya, October 10th 2022



Laurenz Alan Ricardo Sugianto

APPROVAL 1

**CULINARY INNOVATION AND NEW PRODUCT DEVELOPMENT
PROJECT**

Name : Laurenz Alan Ricardo Sugianto
Place, Date of Birth : Semarang, August 10th 1996
NIM : 2074130010013
Study Program : D3 Seni Kuliner
T I T L E : Plant-Based Tekwan Soup

This paper is approved by:

Head of Culinary Arts Study Program,

Date: October, 27th 2022



Hilda Tjahjani Iskandar, S.E., Ak., C.A., M.M.

NIP. 19691029 2002 072

Advisor,

Date: October, 27th 2022



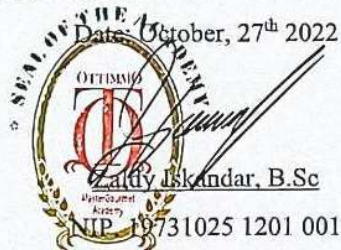
Latifahtur Rahmah, S.Pd., M.Pd.

NIP. 19940225 2002 070

Director of

Akademi Kuliner dan Patiseri OTTIMMO Internasional

Date: October, 27th 2022



Zaidy Iskandar, B.Sc

NIP. 19731025 1201 001

APPROVAL 2

PLANT-BASED TEKWAN SOUP

Culinary Innovation and New Product Development report by:

LAURENZ ALAN RICARDO SUGIANTO

2074130010013

This report is already presented and pass the exam on:

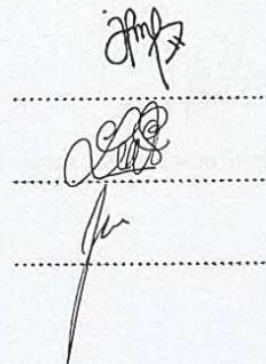
(October 25th 2022)

Examiners:

Examiner 1 : Latifahtur Rahmah, S.Pd., M.Pd

Examiner 2 : Dahlia Elianarni S.T.P., M.Sc

Examiner 3 : Gilbert Yanuar H., A.Md. Par.



The image shows three handwritten signatures in black ink, each positioned above a horizontal dotted line. The first signature is at the top right, the second is in the middle, and the third is at the bottom. The signatures are stylized and difficult to read.

PREFACE

First and foremost, praise to the Almighty Jesus Christ for his full blessings which allow me to accomplish my Culinary Innovation and New Product Development Report with the topic of “**PLANT-BASED TEKWAN SOUP**”. This Culinary Innovation and New Product Development Report is submitted to fulfill the requirement for a diploma degree of Study Program of Culinary Arts, Ottimmo International Master Gourmet Academy.

I realize that this report is far from perfection and there remains many lacks. I am open to any suggestions and critics upon this report in order to make better work in the future. Hopefully, this report could make a difference in the upcoming generation and benefit for both readers and development in culinary art field.

Surabaya, October 10th 2022



Laurenz Alan Ricardo Sugianto

EXECUTIVE SUMMARY

Tekwan is one of traditional food from South Sumatra, Indonesia. Tekwan is a restructured-fish product, made of fish-meat, flour, egg, water, and seasoning. It is usually served with shrimp-based soup. On the other hand, there is a rising global demand on plant-based diet, where people are shifting from animal to plant-based food due to several reasons. Suppose to follow what is trending globally on plant-based diet, the use of fish-meat and egg in Tekwan are suggestively substituted by mung beans and porang flour.

Mung beans and porang flour are selected since they have similar nutrient content and functional properties to replace fish-meat and egg, in which mung bean is high in protein and porang flour can perform as binder in Plant-Based Tekwan dough. Then, the shrimp-based soup is as well replaced by vegetable-based soup to serve along with the Tekwan. To complete the dish, there are some sides to complement, which are vermicelli, wood-ear mushroom, carrot, and sprinkle of spring onion.

Mung beans and porang flour are Indonesian local resources. Therefore, Plant-Based Tekwan Soup is an innovative product, of which is emerging the alternative usage of both mung beans and porang flour as Indonesian local resources. Moreover, Plant-Based Tekwan Soup is enhancing the opportunity of Indonesian local food to international market.

Keywords : *Tekwan, Plant-Based, Mung beans, Porang flour, Indonesian local food*

TABLE OF CONTENT

PLAGIARISM STATEMENT	i
APPROVAL 1	ii
APPROVAL 2.....	iii
PREFACE	iv
EXECUTIVE SUMMARY.....	v
TABLE OF CONTENT	vi
LIST OF PICTURES	viii
LIST OF TABLES.....	ix
CHAPTER I INTRODUCTION	1
1.1. Background of Study	1
1.2. The Objectives of the Study.....	2
CHAPTER II PRODUCT OVERVIEW.....	3
2.1. Descriptions of Ingredients	3
2.1.1. Ingredients for Tekwan	3
2.1.2. Ingredients for Vegetable Stock	4
2.1.3. Ingredients for Tekwan Soup	5
2.2. The Utensils Used during the Processing	6
2.3. Approved and Revised Recipe	7
2.3.1. Approved Recipe	7
2.3.2. Revised Recipe	7
2.3.2.1. Ingredients for Tekwan	7
2.3.2.2. Ingredients for Vegetable Stock	7
2.3.2.3. Ingredients for Tekwan Soup	7
2.3.2.4. Method	8
2.4. Product Processing Sequence using Flowchart.....	10
2.5. Product Processing Method with Pictures	11
CHAPTER III NUTRITION AND FOOD SAFETY	18
3.1. Nutritional Fact of The Finished Product	18
3.2. Food Safety	22
3.2.1. Processing, Storage Temperature	22
3.2.2. Product Self-Life.....	23
3.2.3. Product Packaging	23
CHAPTER IV FINANCIAL ASPECT.....	26
4.1. Product Cost.....	26

4.1.1. Start-Up Capital	26
4.1.2. Labour Cost	27
4.1.3. Raw Material Cost	27
4.1.4. Packaging Cost	28
4.1.5. Utility Cost	29
4.1.6. Rent Cost	29
4.1.7. Total Cost	29
4.2.Product Selling Price	30
4.2.1. Product Price.....	30
4.2.2. Product Selling Price.....	30
4.3.Break Even Point.....	30
4.3.1. Break Even Point (Unit).....	30
4.3.2. Break Even Point (Rp)	30
4.4.Product Competitive Advantages.....	31
CHAPTER V CONCLUSION AND SUGGESTION.....	32
5.1.General Summary.....	32
5.2.Suggestion for Further Development	32
5.3.Benefits of the Study	33
APPENDIX	34
BIBLIOGRAPHY.....	41

LIST OF PICTURES

Picture 2.1. Ingredients for Tekwan.....	3
Picture 2.2. Ingredients for Vegetable Stock.....	4
Picture 2.3. Ingredients for Tekwan Soup.....	5
Picture 2.4. Utensils Used during The Processing.....	6
Picture 2.5. Flowchart of Product Processing Sequence.....	10
Picture 2.6. Pan-frying Napa Cabbage until Caramelized	11
Picture 2.7. Making Vegetable Stock	11
Picture 2.8. Porang Flour Soaked in Hot Water	12
Picture 2.9. Porang Gel	12
Picture 2.10. Boiling Mung Bean	13
Picture 2.11. Mung Bean Paste.....	13
Picture 2.12. Wet Ingredients for Tekwan Dough.....	13
Picture 2.13. Dry Ingredients for Tekwan Dough	14
Picture 2.14. Tekwan Dough.....	14
Picture 2.15. Shaping Tekwan Dough using Spoon	14
Picture 2.16. Cooking Tekwan Dough in Boiling Water.....	15
Picture 2.17. Cooked Tekwan is Floating.....	15
Picture 2.18. Sauteing Garlic and Shallot for Tekwan Soup.....	15
Picture 2.19. Cooking the Tekwan Soup to Boil.....	16
Picture 2.20. Soaked Vermicelli and Wood-Ear Mushroom.....	16
Picture 2.21. Plant-Based Tekwan Soup.....	17
Picture 3.1. Nutritional Fact of Plant-Based Tekwan Soup	21
Picture 3.2. Polypropylene Plastic Bowl 750ml.....	25
Picture 3.3. High-Density Polyethylene Plastic 12x24cm	25

LIST OF TABLES

Table 2.1. Ingredients for Tekwan.....	3
Table 2.2. Ingredients for Vegetable Stock.....	4
Table 2.3. Ingredients for Tekwan Soup.....	5
Table 2.4. Utensils Used during The Processing.....	6
Table 3.1. Nutritional Value of Sago Flour.....	18
Table 3.2. Nutritional Value of Mung Beans	19
Table 3.3. Nutritional Value of Porang Flour	20
Table 3.4. Nutritional Value of Ingredients for Plant-Based Tekwan Soup	20
Table 3.5. Nutritional Value of Ingredients used in The Recipe for Plant-Based Tekwan Soup.....	21
Table 4.1. Start-Up Capital	26
Table 4.2. Labour Cost.....	27
Table 4.3. Raw Material Cost.....	27
Table 4.4. Packaging Cost.....	28
Table 4.5. Utility Cost.....	29
Table 4.6. Rent Cost	29