

RESEARCH AND DEVELOPMENT FINAL PROJECT

“BONEBON”

(High Calcium Flavor Enhancer from Tuna Fish Bones)



By :

VIVIANA CYNTHIA

1774130010021

**CULINARY ARTS STUDY PROGRAM
OTTIMMO INTERNATIONAL MASTERGOURMET ACADEMY
SURABAYA
2019**

**RESEARCH AND DEVELOPMENT NEW PRODUCT
FINAL REPORT
“BONEBON”
(High Calcium Flavor Enhancer from Tuna Fish Bones)**

Arranged by:

VIVIANA CYNTHIA (1774130010021)

Surabaya, August 27th 2019.

Approved by:

Heni Adhianata, S.TP., M.Sc. 


Dr. Ir. Fadjar Kurnia Hartati, M.P. 

Chef Ryan Yeremia Iskandar 

Chef Kresna Bayu Pranata 


Knowing,

**Director of OTTIMMO
International Mastergourmet Academy,**


Zaldy Iskandar, B.Sc.

NIP: 197310251201001

**Head of Study Program Culinary
art, OTTIMMO International
Mastergourmet Academy,**


Irra Chrisyanti Dewi, S.Pd., M.S.M

NIP: 197812011702028

ACKNOWLEDGEMENT

Praise and thanks to God Almighty for his blessing and guidance to the successful completion of this Research and Development report. I can complete the writing of Research and Development Final Project entitled "BONEBON", high calcium flavor enhancer from tuna fish bones. This report is prepared as one of the requirements to complete the Diploma III of Culinary Arts.

During the completion process of this report, I have received so much guidance and assistance from various parties. To that end, I would like to express my gratitude sincerely to the names below:

1. My parents who have provided me to achieve good education and always giving me their support, love and best wishes.
2. Ms. Heni Adhianata as my RnD Advisor who has guided, provide guidance and suggestions until the completion of this report.
3. Dr. Ir. Fadjar Kurnia Hartati, M.P as the examiner on the presentation.
4. Mr. Yayon Pamula Mukti as the examiner on the presentation.
5. Chef Ryan Yeremia Iskandar as the examiner on the presentation.
6. Chef Kresna Bayu Pranata as the examiner on the presentation.
7. Mr. Zaldy Iskandar as Director of OTTIMMO International MasterGourmet Academy Surabaya.
8. Ms. Irra Chrisyanti Dewi as Head of the Culinary Arts Study Programme.
9. My dearest friend, Gabrielle Tyeisia, who have helped me in motivation and courages.

Finally, I hope that this RnD report can be useful for us all.

Surabaya, August 27th 2019



Viviana Cynthia

EXECUTIVE SUMMARY

Bonebon is a product of flavor enhancer that made of tuna fish bones. The amount of tuna in Indonesia is very abundant and cause a large amount of fish bone waste. This is become the reason why the author use tuna fish bones as Bonebon's main ingredient for reducing waste in Indonesia.

Bonebon also has a lot of benefits in health condition. One of its health benefit is its high calcium content. Calcium is important to human body to keep healthy bones and teeth. Bonebon is made from natural ingredients and don't contain any MSG or other industrial processes. Bonebon as a flavor enhancer makes food become delicious because of the natural glutamate contained in the ingredients.

There will be 5 types of processing Bonebon. First is the blanching process where all the fish bones are blanched to remove extra blood in the bones. Second is the cooking process. All ingredients are cooked in a pressure cooker to soften the fish bones and also produce delectable fish broth to be absorbed by the fish bones. Third is the drying process with sun heat where the fish bones will be sun-dried for three times to make sure the bones is fully dried out. Fourth is the grinding process with a blender to result in a powder form. And the last process is the packaging process.

Bonebon will be packed in a PET packaging bottle. In each pack there will be 40 grams of Bonebon. Bonebon will be sold for IDR 20,000/pack.

Keywords: Bonebon, Flavor Enhancer, Tuna Fish Bones, Bone Waste, Health Benefit, Calcium, Glutamate, Processing Product, Packaging.

PLAGIARISM STATEMENT

I certify that this assignment/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 assignment/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 persons.

On 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 you have a claim against the authenticity of my work.

August 27th 2019



Viviana Cynthia

TABLE OF CONTENTS

COVER	i
APPROVAL	ii
ACKNOWLEDGEMENT	iii
PLAGIARISM STATEMENT	iv
EXECUTIVE SUMMARY	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1 – INTRODUCTION	1
1.1 Background of Ingredients.....	1
1.2 Reason for Selection of Ingredients.....	3
1.3 The Main Material Processing Reason	5
1.4 The Content of Nutrients and Health Benefit	6
1.5 Description of New Product Features	8
CHAPTER 2 – INGREDIENTS AND UTENSILS OVERVIEW	9
2.1 Description of The Material to be Used	9
2.1.1 Tuna Fish Bones	9
2.1.2 Kombu Seaweed	9
2.1.3 Onion.....	10
2.1.4 Garlic.....	10
2.1.5 Shallot.....	10
2.1.6 Carrot	11
2.1.7 Ginger	11
2.1.8 Leek.....	11
2.1.9 Celery.....	12
2.1.10 White Peppercorn.....	12
2.1.11 Coriander Seeds	13
2.1.12 Lime	13
2.1.13 Mineral Water	14
2.1.14 Fine Sea Salt	14
2.1.15 Caster Sugar	15
2.1.16 Maltodextrin.....	15
2.2 The Tools Used During the Processing	16
2.2.1 Digital Kitchen Scale	16
2.2.2 Sauce Pan	16
2.2.3 Non-stick Pan.....	17
2.2.4 Pressure Cooker	17
2.2.5 Blender.....	18
2.2.6 Mortar and Pestle	18
2.2.7 Strainer.....	19
2.2.8 Knife	19
2.2.9 Spoon	19
2.2.10 Plate.....	20
2.2.11 Plastic Wrap.....	20

CHAPTER 3 – NEW PRODUCT PROCESSING SEQUENCE.....	21
3.1 The Processing Product by Using Flowchart	21
3.1.1 Blanching Process.....	23
3.1.2 Cooking Process.....	25
3.1.3 Sun-Drying Process 1	27
3.1.4 Grinding Process 1	28
3.1.5 Sun-Drying Process 2	28
3.1.6 Grinding Process 2.....	30
3.1.7 Sun-Drying Process 3	30
3.1.8 Packaging Process.....	31
3.2 Complete Recipe Attached	32
CHAPTER 4 – NEW PRODUCT OVERVIEW.....	34
4.1 The Facts of Nutrition	34
4.1.1 Tuna Fish Bones	34
4.1.2 Maltodextrin.....	35
4.1.3 Fine Sea Salt	36
4.1.4 Caster Sugar	37
4.1.5 Complete Nutrition Fact	38
4.2 New Product Characteristic	39
CHAPTER 5 – BUSINESS PLAN.....	40
5.1 Identification of Investment Opportunities – SWOT Analysis	40
5.2 Marketing Aspect.....	41
5.3 Technical Aspect.....	42
5.4 Legal Aspect	42
5.5 Financial Aspect.....	43
5.5.1 Variable Cost (Food Cost)	43
5.5.2 Fixed Cost.....	44
5.5.3 Overhead Cost.....	45
5.5.4 Total Cost of Production.....	45
5.5.5 Selling Price.....	46
5.5.6 Break Even Point (BEP)	46
CHAPTER 6 – CONCLUSION.....	47
6.1 Conclusion	47
6.2 Suggestion.....	48
BIBLIOGRAPHY	49
APPENDIX.....	50
Appendix 1. Packaging Design.....	50
Appendix 2. Supplier List.....	52
Appendix 3. Product Logo, Before and After Packing.....	53
APPROVED RECIPE ATTACHED	55
FORM CONSULTATION.....	56

LIST OF TABLES

Table 1. Nutrient Contents of Tuna Fish Bones per 100 g	34
Table 2. Bonebon Nutrition Facts	38
Table 3. Variable Cost in Food Cost and Packaging Cost.....	43
Table 4. Fixed Cost with Depreciation Cost.....	44
Table 5. Overhead Cost.....	45
Table 6. Total Cost of Production.....	45

LIST OF PICTURES

Picture 1. Tuna Fish Bones	9
Picture 2. Kombu Seaweed	9
Picture 3. Onion	10
Picture 4. Garlic	10
Picture 5. Shallot.....	10
Picture 6. Carrot.....	11
Picture 7. Ginger	11
Picture 8. Leek	11
Picture 9. Celery.....	12
Picture 10. White Peppercorn	12
Picture 11. Coriander Seeds.....	13
Picture 12. Lime.....	13
Picture 13. Mineral Water.....	14
Picture 14. Fine Sea Salt	14
Picture 15. Caster Sugar.....	15
Picture 16. Maltodextrin	15
Picture 17. Digital Kitchen Scale.....	16
Picture 18. Sauce Pan.....	16
Picture 19. Non-stick Pan	17
Picture 20. Pressure Cooker	17
Picture 21. Blender.....	18
Picture 22. Mortar and Pestle.....	18
Picture 23. Strainer.....	19
Picture 24. Knife	19
Picture 25. Spoon.....	19
Picture 26. Plate	20
Picture 27. Plastic Wrap.....	20
Picture 28. Flowchart Processing Product	21
Picture 29. Raw Tuna Fish Bones.....	23
Picture 30. Blanching Tuna Fish Bones.....	23
Picture 31. Blanched Tuna Fish Bones	24
Picture 32. Caramelize the Aromatics	25
Picture 33. All Ingredients in a Pressure Cooker.....	25
Picture 34. Fish Bones and Broth in a Sauce Pan.....	26
Picture 35. Sun-drying Process 1	27
Picture 36. Dried Fish Bones	27
Picture 37. Grinding Process 1.....	28
Picture 38. Fish Bones Powder	28

Picture 39. The Plate is Wrapped and with Small Holes	29
Picture 40. Sun-drying Process 2	29
Picture 41. Grinding Process 2.....	30
Picture 42. Sun-drying Process 3	30
Picture 43. Straining.....	31
Picture 44. Packaging Bottle of Bonebon	31
Picture 45. Nutrition Facts of Maltodextrin.....	35
Picture 46. Nutrition Facts of Fine Sea Salt.....	36
Picture 47. Nutrition Facts of Caster Sugar	37
Picture 48. Bonebon Packaging Front Side	51
Picture 49. Bonebon Packaging Right Side	51
Picture 50. Bonebon Packaging Back Side.....	52
Picture 51. Bonebon Packaging Left Side	52
Picture 52. Product Logo	54
Picture 53. Product Before Packing.....	55
Picture 54. Product After Packing	55