

RESEARCH AND DEVELOPMENT FINAL PROJECT

POMELO BBQ



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(Healthy Barbecue Sauce for Everyone)

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Surabaya, 10 July 2020

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PREFACE

Praise the authors pray to God Almighty for his abundant grace in the preparation of this research report. This research report is a mandatory requirement in completing course assignments.

There is a certain pride if this research activity can be completed with good results. With the limitations of the author in making research, there are quite a number of obstacles that the writer encountered. And if this research can eventually be completed properly, it is certainly due to the help and support of many parties involved.

For that, the authors convey their gratitude to all those who have helped. Among them:

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There is nothing the writer can give besides sincere prayer and gratitude to the supporters. The author sincerely hopes that this research report will be very useful for anyone who reads and adds knowledge to us all.

Surabaya, 10 July 2020

Ricardo Halim

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EXECUTIVE SUMMARY

Fruits are healthy and nutritious food. fruits contain lots of vitamins and minerals, including vitamin C in oranges and kiwi, vitamin A in bananas, vitamin E in mangoes and many more ingredients in fruit that are beneficial to human health. Fruit can be consumed in two ways, namely through the cooking process and not.

More fruit is consumed without going through the cooking process, although there are some fruits that are consumed after going through the cooking process such as pumpkin, carrots, and others. Fruit has benefits for human health, including helping the development of the child's body, maintaining the health of the body's organs, increasing endurance, accelerating blood circulation, and so on. Besides fruit is good for a diet.

Many women use fruit as a healthy diet menu. But even though it contains a lot of vitamins and minerals that have benefits for human health, there are still a large number of people who don't like fruit. This is caused by many factors including the procedure for presentation that does not vary, the taste of certain fruits that are less liked, the form of presentation that is less attractive, and others.

Based on this, it is necessary to form a business in the form of shops or food stalls that sell fruit that is interesting to eat, both in terms of serving procedures, form of presentation, and taste. The effort is to form vegetables and fruits in such a way that they become varied foods and drinks. However, I am innovating to make Barbecue sauce that is good for health, because it does not contain sugar but honey as a natural sweetener in this product, and also a variety of fruit in it. So for vegetarians or people who don't like fruits can enjoy this variety of food.

Keywords : fruit, vitamin, diet, health

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND STUDY

The pomelo (*Citrus maxima Merr.*), a native plant from Asia, which is best cultivated in China, southern Japan, Vietnam, Malaysia, Indonesia and Thailand. The fruit of pomelo is commonly eaten fresh or made as juice. It is also popular for jam and syrup. In traditional medicine, the fruit peel has been used for cough, swellings, and epilepsy, because of the effectiveness of the volatiles. (Phi, Nguyen Thi Lan. 2012).

Pomelo is the largest citrus fruit with a diameter of 15-25 cm and weighs 1-2 kg. The outer skin is yellowish green, while the inner skin is thick and white. Thick skin is usually used as sweet food. Grains of grapefruit can be eaten just like that or become a salad mixture. (Hermansyah, Heri. 2012).

The middle layer (albedo) of fruit peel is extracted for pectin which is used as dietary fiber for reducing body weight. The citrus species are famous for the source of essential oils. *C. Maxima* is the same as other Citrus species that contains essential oil glands in their fruit peel and flower petals. The Citrus peel oils have a strong and desirable aroma with refreshing effect. (Hastuti, Utami Sri. 2007)

The *C. Maxima* is peeled for their fresh pulp and juice that are sold both in Thailand and foreign countries. The high demand of pomelo in the market causes around one metric ton of the peel left as by product in each day. These wastes could be served as raw materials for essential oil industries. So the study of *C. Maxima* peel essential oil could increase the value of the useless waste.

Pomelo contains various nutritional components. This orange is rich in vitamin C, potassium and fiber. Pomelo is efficacious for boosting immunity, lowering blood pressure, bone health, fighting premature aging, losing weight, and for oral health. (Jensen, M. 2001).

Citrus maxima (pomelo or shaddock), family Rutaceae, is one of the famous fruits in Philippines. The other scientific or synonyms of pomelo are *Aurantiummaximum* Burn. ex Rumph, *Citrus aurantium* L. var *grandis* L., *Citrus grandis* Osbeck and *Citrus pamplemos* Risso. (Jung, Thomas. 2007).

Pomelo is an indigenous plant of Malaya Islands and the east of India. It is widespread in China, Japan, the Philippines, Indonesia, the United State of America and Thailand. *C. Maxima* is medium sized tree. Its leaves have the small winged petioles. (Anonymous, 2017).

The flowers are bisexual and smell sweet. The tree can flower when its age is four years old. The fruit is always round shape and big size. Fruit peel has the 3 layers: the outer layer is called flavedo or epicarp which has the oil glands, the medium layer is called albedo or mesocarp which white in color and has plenty of spongy cells, and the inner layer is called endocarp which is the edible portion of the fruit, the juice sags. (Sahlan, Muhamad. 2007).

Nowadays, after there are no commercial *C. Maxima* essential oil available. Because the extraction of peel essential oils needs modern methodology for reducing solvent residue, impurities and chemicals transformation and increasing yield. These factors influence on the oil quality. Therefore, supercritical carbon dioxide extraction is considerable advantage over the other extraction methods. It is true that the gardener grows *C. Maxima* trees for their fruits not flower. However, after fertilization of *C. Maxima* flower, their petals always fall down and they are allowed to wither with no use. (Liu, Jian-Hua. 2010).

1.2 OBJECTIVE STUDY

In Indonesia, this orange is still less empowered by people who live in several regions that are spread in Indonesia. This plant management is usually adapted to the need for grapefruit especially on religious celebrations.

According to research the need for pectin in Indonesia has increased from year to year. In 2020 the estimated need for pectin is to reach 1,320 tons (Puspitasari, 2017). This amount can actually be met if there is an utilization of orange peel as a source of pectin production by industries in Indonesia (Pontianak Industrial Research and Standardization Center, 2017).

In developing this fruit, especially for everyone that wants healthier, we made an innovation in the form of Pomelo Barbecue Sauce. Besides we want everyone to know fruits that are rarely exposed like pomelo which has many benefits. And can be consumed for all people, because Pomelo has a number of substances needed by the body. And can be used as an example to process support into processed products that are useful in the community.

1.3 BENEFITS STUDY

Pomelo, is the largest type of citrus fruit among other citrus such as lemon or orange. Besides being fresh, eating this fruit can also provide health benefits, because the benefits of pomelo are quite diverse.

Benefits of pomelo, can be obtained from a variety of nutrients in it. The following is the benefits content contained in a grapefruit which is around 610 grams. (Blancke, 2016).

1. Rich in antioxidants

Grapefruit is rich in antioxidants that can prevent cell damage caused by excessive free radical exposure. Free radicals are components found in food and the environment. If the levels are excessive, free radicals can cause various chronic diseases that are dangerous. (Blancke, 2016).

2. Helps increase endurance

Benefits of pomelo on this one, obtained from its vitamin C content which is quite high. Vitamin C acts as an antioxidant that can increase the activity of white blood cell activities that will attack the causes of diseases in the body. (Blancke, 2016).

3. Healthy for the heart

pomelo is good for the heart because it can reduce cholesterol and triglyceride levels in the blood. Two things are the main factors causing heart disease. (Blancke, 2016).

4. Good to help you lose weight

Because this fruit is low in calories, it is good for consumption for those on a diet. This fruit also contains fiber and protein which will make us full faster with fewer calories. (Blancke, 2016).

5. Good for digestion

High fiber content in pomelo, making it good for digestive health. Fiber can help overcome various digestive problems such as constipation and diarrhea. (Blancke, 2016).

6. Help regulate blood pressure

Pomelo contains potassium which is quite high. While potassium is a vasodilator nutrient. That is, these nutrients can dilate blood vessels and reduce its pressure. (Blancke, 2016).

7. Prevents premature aging

The high antioxidant content in pomelo makes this fruit also considered able to prevent premature aging. Because, antioxidants will help prevent skin damage caused by free radicals. (Blancke, 2016).

8. Believed to help prevent cancer

In a study conducted in test animals, pomelo extract was proven to suppress tumor growth, increase endurance, and kill cancer cells. Pomelo helps in getting rid of diseases like cancer, diabetes, heart diseases and other small and big infections. It also helps in flushing out all the impurities and toxic materials from the body. (Blancke, 2016).

The advantage of this Rnd product is that it is rich in vitamin for the body and introduces Pomelo to the community, and turns off the stigma of pomelo fruit cannot be processed.

After we explain the benefits of pomelo, now we will explain the good impact of the product from R&D, such as:

1. For students, this can be used as a unique main ingredient for trying a variety of new foods.
2. Pomelo Barbecue Sauce products supply many vitamins that can maintain the health of organs in the body.
3. This product provides benefits to substitute the Barbecue Sauce in the market which is sometimes filled with synthetic flavorings and other artificial sweeteners.
4. For Schools, this product has become one of the businesses that have been achieved through science from schools.
5. For readers, can be used as inspiration to create new product that use materials that are not commonly known by the public.

CHAPTER 2

INGREDIENTS AND UTENSILS OVERVIEW

2.1 DESCRIPTION OF MATERIAL TO USE

2.1.1 Pomelo Fruit



Picture 1. Pomelo Orange. (personal document)

The main ingredients of sauce.

2.1.2 Honey



Picture 2. Honey. (anonymous, 2020)

Add sweet flavor.

2.1.3 Soy Sauce



Picture 3. Soy Sauce . (anonymous, 2020)

Use to add the color and flavor inside the sauce.

2.1.4 Pepper



Picture 4. Pepper. (personal document)

Use to add spice odor.

2.1.5 Diced Tomatoes



Picture 5. Diced Tomatoes. (personal document)

Use as an additional ingredients for the sauce.

2.1.6 Diced Paprika



Picture 6. Diced Paprika. (anonymous, 2020)

Use as an additional ingredients for the sauce.

2.1.7 Margarine



Picture 7. Margarine (personal document)
For cooking ingredients.

2.1.8 Lemon



Picture 8. Lemon. (anonymous, 2020)
To add odor.

2.1.9 Minced Garlic



Picture 9. Minced Garlic. (anonymous, 2020)

Use as an additional ingredients.

2.2 THE TOOLS THAT USED DURING THE PROCESSING

2.2.1 Saute Pan



Picture 10. Saute Pan. (personal document)

Use to saute the ingredients.

2.2.2 Blender



Picture 11. Blender. (personal document)

To make Puree.

2.2.3 Wooden Spoon



Picture 12. Wooden Spoon. (personal document)

To mix well when saute the pan.

2.2.4 Jar



Picture 13. Jar. (anonymous, 2020)

To keep the barbecue inside.

2.2.5 knife



Picture 14. Knife. (anonymous, 2020)

Use for cut the pomelo orange, tomatoes, and paprika.

2.2.6 Cutting Board



Picture 15. Cutting Board. (anonymous, 2020)

To place the chopped ingredients.

2.2.7 Stove



Picture 16. Stove. (anonymous, 2020)

To cook the ingredients.

CHAPTER 3
NEW PRODUCT PROCESSING SEQUENCE

3.1 PROCESSING PRODUCT

1. First, cut the pomelo and scrap the flesh. Set aside.



Picture 17. Fresh pomelo on the plate. (personal document)

2. Melt the butter in the small saute pan.



Picture 18. Melted butter on the saute pan. (personal document)

3. Add the pomelo flesh, diced tomatoes and diced paprika. Cook over medium heat.



Picture 19. Pomelo, paprika, and tomato put together in the pan. (personal document)

4. Stir the ingredient until the flesh is soft and start to break the pomelo with the back of the spoon.



Picture 20. Ingredients have softened. (personal document)

5. Add the pomelo flesh, fresh pepper and diced tomatoes and paprika into a blender.



Picture 21. Ingredients in the blender. (personal document)

6. Blend it until very smooth.



Picture 22. Ingredients turn into puree, for 3 minutes (personal document)

7. Pour it again into saute pot.



Picture 23. Puree get into the pan. (personal document)

8. Then add fresh lemon juice.



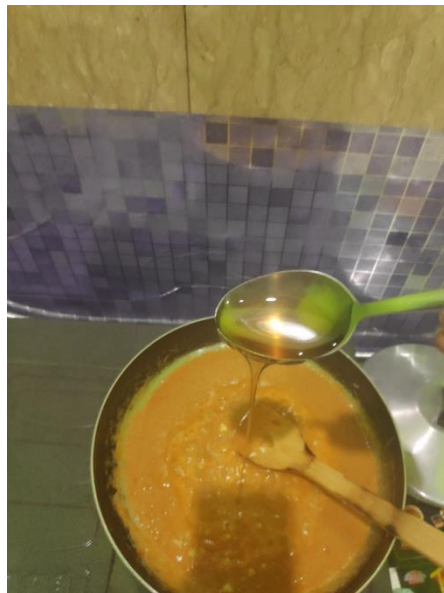
Picture 24. Lemon juice poured into pan for add odor. (personal document)

9. Add soy sauce into the pan.



Picture 25. Soy sauce that poured into the pan. (personal document)

10. Add honey into the pan and mix it well.



Picture 26. Honey for sweetness. (personal document)

11. Mix all the ingredients.



Picture 27. The ingredients got mixed well. (personal document)

12. Let it simmer until its reduced about a third from the beginning of simmer.



Picture 28. Simmering process. (personal document)

13. After it reduced, turn off the heat and let it chill.



Picture 29. Sauce got chilled for a while. (personal document)

14. After it chill enough, let it in into the jar.



Picture 30. Sauce got into the jar. (personal document)

15. Then close the jar cover.



Picture 31. Finishing. (personal document)

3.2 COMPLETE RECIPE ATTACHED

POMELO BBQ SAUCE

Yield : 8 portion (1 Jar of Sauce)

Ingredients :

1. 1 pcs of pomelo
2. 2 tbsp of butter
3. 1 cup diced tomatoes
4. 1 cup of diced paprika
5. 5 tbsp fresh lemon juice
6. 2 ½ tbsp of honey
7. 2 tbsp soy sauce
8. 1 tsp fresh pepper
9. 1 clove garlic (minced)

Method :

1. First, cut the pomelo and scrap the flesh. Set aside.
2. Melt the butter in the small sauce pot. Add the pomelo flesh, diced tomatoes and diced paprika. Cook over medium heat.
3. Stir the ingredient until the flesh is soft and start to break the pomelo with the back of the spoon.
4. Add the pomelo flesh, fresh pepper and diced tomatoes and paprika into a blender. Blend it until very smooth.
5. Pour it again into saute pot. And add the honey, lemon juice, soy sauce, and minced garlic. Stir and bring it to boil, and then simmer it over medium low heat.
6. Let it simmer until its reduced about a third from the beginning of simmer.
7. After that, taste frequently. If needed, add sea salt or pepper.
8. Let it cool and pour into a small jar.

Picture of recipe

POMELO BBQ SAUCE

Yeild : 8 portion

Ingredients :

1. 1 pcs of pomelo ✓
2. 2 tbsp of butter
3. 1 cup diced tomatoes
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Method :

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3. Stir the ingredient until the flesh is soft and start to break the pomelo with the back of the spoon.
4. Add the pomelo flesh, fresh pepper and diced tomatoes and paprika into a blender. Blend it until very smooth.
5. Pour it again into saute pot. And add the honey, lemon juice, soy sauce, and minced garlic. Stir and bring it to boil, and then simmer it over medium low heat.
6. Let it simmer until its reduced about a third from the beginning of simmer.
7. After that, taste frequently. If needed, add sea salt or pepper.
8. Let it cool and pour into a small jar.

Serving Method :


- Can be served for dip sauce or for baste sauce.
- Can be a marinated sauce.
- As sauce for sandwich and burger.
- Can be the base sauce for pizza.
- Etc.

Health Benefit :

1. High containt of pottasium.
2. Maintain cholesterol.
3. Maintain digestion.
4. Increase the production of white blood cells.
5. Overcome blood presure.

*Not Commercial
Unique Ingredients
Healthy*

*OK
OK*



Picture 32. Scanned approval recipe

CHAPTER 4
NEW PRODUCT INFO

4.1 NUTRITION FACT

Table 1. Nutrition Fact per 100 g

Ingredients	Energy(Kkal)	Carbohydrate	Fiber	Fat	Protein
Pomelo	1.835 Kkal	0.474 Gram	0.03 Gram	0.007 Gram	0.023 Gram
Honey	101.92 Kkal	27.56 Gram	0.096 Gram	0 Gram	0.104 Gram
Tomato	1.55 Kkal	0.30 Gram	0.097 Gram	0.032Gram	0.084 Gram
Paprika	18.23 Kkal	8.47 Gram	2.25 Gram	6.98 Gram	0.06 Gram
Lemon	5.89 Kkal	1.07 Gram	0.017 Gram	0.017 Gram	0.086 Gram
Garlic	182 Kkal	37.5 Gram	0.97 Gram	0.32 Gram	7.31 Gram
Soy Sauce	30.7 Kkal	3.9 Gram	0 Gram	0.56 Gram	2.74 Gram
Total	342.155 Kkal	76.664 Gram	3.46 Gram	7.916 Gram	10.372 Gram

The nutrition table above is the nutrition in the final product (pomelo barbecue sauce), all of which encompass the nutritional facts in it. And the nutrition facts below is nutrition that have per servings.

Nutrition Facts	
8 servings per container	
Serving size	(13g)
Amount Per Serving	
Calories	45
<small>% Daily Value*</small>	
Total Fat 1g	1%
Saturated Fat 0g	0%
<i>Trans</i> Fat 0g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 10g	4%
Dietary Fiber 0g	0%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 1g	2%
<small>Not a significant source of vitamin D, calcium, iron, and potassium</small>	
<small>*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

Picture 33. Nutrition Fact

CHAPTER 5

BUSINESS PLAN

5.1 GENERAL DESCRIPTION COMPANY

Company form:

CV pomelo barbecue sauce is a company engaged in the culinary, snack foods namely brownies. CV pomelo barbecue sauce is located in Surabaya. Currently we have made innovations for barbecue sauce products in Indonesia. We made a barbecue sauce that we named "Pomelo Barbecue Sauce".

We want to vary the types of sauce with the basic ingredients pomelo orange that are known by the wider community. Pomelo barbecue sauce, Our products are manifested by the desire of Chef Ottimmo who collaborates with Lecturer Ottimmo to create new innovations for the culinary world, and elevate the prestige of pomelo orange as a food ingredient that is only underestimated by its benefits.

Company vision:

Being a successful company, especially in making innovation barbecue sauce that are useful in the community based on unique fruit ingredients that are rarely known by many people.

Company mission:

1. Add public insight about pomelo orange.
2. Focus on increasing pomelo orange innovations that can be processed into foods that have benefits for the body.
3. Developing the products we have made.

5.2 BUSINESS SCOPE

A. Ingredients :

1. Pomelo orange, used for the main ingredient of barbecue sauce.
2. Butter, used for cooking.
3. Diced tomatoes, used as an additional ingredient.
4. Diced paprika, used as an spice flavor.
5. Fresh lemon juice, to add odor.
6. Honey, for sweet taste.
7. Soy sauce, used for coloring and taste.
8. Fresh pepper, used for spice flavor.
9. Clove garlic (minced), used for flavoring.

B. Roasted Sweet Potato Brownies making process

1. First, cut the pomelo and scrap the flesh. Set aside.
2. Melt the butter in the small sauce pot. Add the pomelo flesh, diced tomatoes and diced paprika. Cook over medium heat.
3. Stir the ingredient until the flesh is soft and start to break the pomelo with the back of the spoon.
4. Add the pomelo flesh, fresh pepper and diced tomatoes and paprika into a blender. Blend it until very smooth.
5. Pour it again into saute pot. And add the honey, lemon juice, soy sauce, and minced garlic. Stir and bring it to boil, and then simmer it over medium low heat.
6. Let it simmer until its reduced about a third from the beginning of simmer.
7. After that, taste frequently. If needed, add sea salt or pepper.
8. Let it cool and pour into a small jar.

C . Purchasing Aspects

The main ingredient of Pomelo Barbecue Sauce is pomelo orange, to get the main ingredients, we look for pomelo orange in modern market or traditional market in surabaya, as well as in East Java, traders in the market.

Regarding other supporting raw materials such as pomelo fruit, tomatoes, fresh paprika, and pepper, we are working with suppliers / providers of raw materials. So in the production of Pomelo Barbecue Sauce we don't do it ourselves. We recognize this as the basis of our efforts that benefit many people.

D. Production Aspects

We will always do the highest quality, with the selection of high-quality materials. We began to manage these materials in the production process. Sorting until you find good quality sweet potatoes for processing, the best date palm sorting process. packaging process, until the product is ready to be marketed in the wider community.

E. Marketing and Sales Aspects

The first step that we take to market our products is to work with regional stores, supermarkets. We market our products through social media, such as: Tokopedia, Bukalapak, Facebook, Instagram, Line, Whatsapp. The first place we build a place of sale is Surabaya.

The reason we chose this area, many people care about health. And satisfaction of many people after trying innovations from our products. After our products are quite popular in the Surabaya community, we are still trying to maintain the quality and quantity of our products to remain comfortable in the community.

5.3 STAKEHOLDER

1. Retailer

Retailers are the first point of contact between us and consumers. With the cooperation of several retailers, especially gift shops, we can support the promotion of our new product (Pomelo Barbecue Sauce) to consumers. In addition, retailers are also expected to have a good sale value to sell Pomelo Barbecue Sauce, which is a barbecue sauce that has many benefits for the body.

2. Supplier

Suppliers have a very important role in the product manufacturing process. By working with suppliers, we can get good raw materials for making Pomelo Barbecue Sauce. For the main raw material, definitely Pomelo Orange, we work with suppliers and so on. For other complementary materials, we collaborate with grocery stores, local and online.

3. Creditors

In developing our products, we really need a creditor who is able to provide loans or capital for the continuity of our products. So we can make innovation without having to experience financial problems in production.

4. Customers

In all cases, a customer is wealth or someone who likes the products we make. In maintaining relationships with customers, we will continue to develop innovations from Barbecue Sauce, aside from Pomelo Orange, as well as maintaining product quality.

5. Franchies Partners

The role of the Franchise partner will be seen if our company has developed quite quickly. Where collaboration will be opened with the public / community through the Franchise method and this relationship will provide passive income.

6. Government

The government has a very strong relationship with the growth of a company. Each product must go through several selections from BPOM and MUI in obtaining halal certificates and trading permits in accordance with government procedures.

5.4 SWOT ANALYSIS

A. Strength:

1. We strive to make our products harmless to consumers.
2. Efficacy of sweet potato, rarely found in other products.
3. Our product is the first roasted sweet potato brownies innovation in Indonesia.
4. Use date palm for sweetener, so it is safe for everyone.

B. Weaknesses:

1. Basic materials are difficult and expensive, if not in season.

C. Opportunities

1. Society needs the benefits of sweet potatoes.
2. Substitute snacks that have many benefits for the body.

D. Threats

1. New products are easily beaten by products if they have a mature strategy.
2. Systematic marketing.

5.5 MARKETING ASPECT

A. Consumer Characteristic

Table 2. Consumer Characteristic

No	Consumer Characteristic	Consumer Necessary
1.	Student	Personal Consumption
2.	Public	Personal Consumption and Certain Event

The results of an analysis from the official government website (www.pangaku.org) states that pomelo orange also contains many substances that can help the body, such as calcium (Ca) 23 mg, water 86.3 g, Phosphorus (P) 27 mg, Iron (Fe) 0.5 mg, Vitamin C (Vit. C) 43 mg and potassium (K): 366.1 mg.

B. Marketing Segmentation

Table 3. Marketing Segmentation

Marketing Segmentation	Very Important	Not Important
1.	Taste variation and price	Merk and Usefull
2.	Taste variation, halal aspect, hygiene, usefull and nutrition	Packaging and Price
3.	Taste quantity, halal aspect, and usefull	Merk

Based on the analysis of table B, our product marketing strategies are as follows:

1. Introducing and promoting our Pomelo Barbecue Sauce in the Surabaya Pakuwon Mall, as well as the superindo market. The introduction and promotion of our Pomelo Barbecue Sauce products are aimed at families, as well as children in the market area.
2. Selling and introducing our Pomelo Barbecue Sauce products at educational fairs.

3. Selling our Pomelo Barbecue Sauce products on holidays such as Saturdays, Sundays or other holidays that are usually full of customers.
4. Selling Pomelo Barbecue Sauce at small food stores around the school in Surabaya.
5. Selling our Pomelo Barbecue Sauce products in stores that sell traditional and modern cuisine around the surabaya area.

A. Marketing Strategy

Segmentation

This business production of Pomelo Barbecue Sauce is aimed at people who like healthy food and upper middle class. This product can be consumed by all ages from young to old. This product will be enjoyed by people who take care of their health against regular barbecue sauce and this product can be a healthy alternative to another sauce.

Targeting

- Upper middle class
- Kids
- Teenager
- Adult
- Oldster

Positioning

This business position will be in a shophouse in the western place in Surabaya, which is a store below the Water Palace apartment near Pakuwon Mall, Jl. Mayjen Yono Suwoyo No. 2. The reason for choosing that place is because of the strategic position, visited place.

Product

1. High quality products and ingredients.
2. New innovation product.
3. Healthy product.

Promotion

The promotion of this product will be promoting in the social media like Instagram and Facebook. Also we have a online store in Tokopedia and Shopee.

5.6 FINANCIAL ASPECT

1. Variable cost

Table 4. Variable Cost

No	Description	Total Unit (Per Day)	Cost/Unit (Rp.)	Cost/Day (Rp.)	Cost/Package (Rp.)
1.	Pomelo Orange	100 Kg	15.000 / Kg	1.500.000	15.000
2.	Butter	1,3 Kg	13.000 / Kg	16.900	169
3.	Diced Tomatoes	34 Kg	10.000 / Kg	340.000	3.400
4.	Diced Paprika	34 Kg	17.000 / Kg	578.000	5.780
5.	Lemon	6 Kg	20.000 / Kg	120.000	1.200
6.	Honey	2,8 Kg	80.000 / Kg	244.000	2.440
7.	Soy Sauce (620 ml Bottle)	4 Pcs	55.000 / Pcs	220.000	2.200
8.	Packaging				
	Jar	100	5.000 / Pcs	500.000	5.000
	Sticker	100	500 / Pcs	50.000	500
	Total			3.568.900	35.689

Notes :

1 month = 26 work days

1 day = Producing 100 packs/day

Variable cost per month = $3.568.900 * 26$
= 92.791.400

Variable cost per year = $92.791.400 * 12$
= 1.113.496.800

Production capacity per month = $600\text{packs}(\text{per week}) * 4$
= 2.400packs

Production capacity per year = $2.400 * 12$
= 28.800

2. Overhead Cost

Table 5. Overhead Cost

Description	(Unit/Month)	Cost/unit (Rp)	Cost/Month (Rp)
Trash	-	30.000	120.000
Employee's salary	2 people	5.000.000	10.000.000
Electricity & water	-	450.000	450.000
TOTAL			10.570.000

3. Fixed Cost

Table 6. Fixed Cost

Materials	Total	Depreciation	Depreciation/Year	Depreciation/Month
Blender	IDR 480.000	5 year	IDR 96.000	IDR 8.000
Wooden Spoon	IDR 10.000	5 year	IDR 2.000	IDR 166
Saute Pan	IDR 107.000	5 year	IDR 21.400	IDR 4.280
Knife	IDR 78.300	5 year	IDR 15.660	IDR 1.305
Scales	IDR 79.000	5 year	IDR 15.800	IDR 1.316
Cutting board	IDR 190.000	5 year	IDR 38.000	IDR 3.166
Stove	IDR 2.829.700	5 year	IDR 565.940	IDR 47.161
Total	IDR 3.780.000		IDR 756.000	IDR 65.494

Break even point

Notes:

$$\text{Interest rate} = 50\%$$

$$\text{Depreciation} = 20\% * \text{Rp. } 3.780.000 = \text{Rp. } 756.000$$

HPP/ Cost of production per month

$$= \text{Variable cost} + \text{overhead cost} + ((20\% * \text{Fixed cost}) : 12)$$

$$= \text{Rp. } 92.791.400 + 10.570.000 + ((20\% * 3.780.000) : 12)$$

$$= \text{Rp. } 103.570.000$$

$$\text{HPP/ Cost of production per Packs} = \text{Rp. } 103.570.000 : 2.400 \text{ packs}$$

$$= \text{Rp. } 43.095 = \text{Rp. } 43.100$$

$$\text{Selling price / pcs} = \text{Rp. } 43.100 + (20\% * \text{Rp. } 43.100)$$

$$= \text{Rp. } 51.720$$

$$\text{Profit / pcs} = \text{Selling Price} - \text{HPP (Cost of Production)}$$

$$= \text{Rp. } 51.720 - \text{Rp. } 43.100$$

$$= \text{Rp. } 8,620$$

$$\text{Profit total / day} = \text{Rp. } 8,620 \times 100 \text{ packs}$$

$$= \text{Rp. } 862.000$$

$$\text{BEP (Unit)} = \text{Rp } 3.780.000 : \text{Rp. } 8.620$$

$$= 438 \text{ packs}$$

$$\text{BEP (Rp)} = \text{Rp } 3.780.000 : (1 - (\text{Rp. } 43.100/\text{Rp. } 51.720))$$

$$= \text{Rp. } 18.900.000$$

The amount that is needed to reach break even point is Rp. 18.900.000 In order to reach the break even point, the product that needs to be sold is 438 packs.

5.7 TECHNICAL ASPECT

Environmental management concepts and plans

The establishment of an industry certainly cannot be separated from the taking of natural resources around it, both directly and indirectly. Environmental aspects are very closely related to the company because in maintaining production waste which sometimes contains poisons after being produced. Sometimes dumping in a river, is a foolish act in the disposal of waste that clearly endangers living things in the river, and disturbs the natural balance of the environment.

Likewise, founder of Pomelo Barbecue Sauce Business, which cannot be separated from waste. From the process of making Pomelo Barbecue Sauces, it produces organic waste / can be called kitchen waste in the form of pomelo peels.

A. Objectives of Environmental Management

According to the implementation guidelines PP. 29 of 1996 concerning Environmental Impact Analysis set by the Government stated that the purpose of environmental management is to maintain the condition of the ecosystem around the industrial area and meet government regulations on the environment and for environmental sustainability. industrial activity for a certain period of time.

Procedure:

1. Organic Trash (Kitchen Trash) Packed
2. Organic waste is ready to be given to organic compost.

5.8 LEGAL ASPECT

Before this business begins, a legal business permit from the state is needed. That are a BPOM License, SNI License and Halal certificate. Why we need this license? This because make our product easy to market and also ensure that this product is safe and healthy for human consumption.

BPOM is a food production permit produced by home industry scale which is determined by BPOM. BPOM usually the registration of food and drinks for regions in Indonesia is handled directly by the Directorate of Food Safety Assessment of BPOM. After the registration form is filled in, it is usually returned to the officer together with a sample of the product and the design of the label in accordance with what has been distributed.

SNI license to provide product quality assurance to the public, that you must fill in the SPPT form, you will be several documents as attachments, Legalized photocopy of ISO 9001: 2000 Quality Management System certificate. The next step is to verify the application made by LSPro-Pustan. Then the next step is checking the appropriateness of the application of the quality management system. The LSPro-Pustan team will come to the production site and take product samples for testing. The team will close the audit results and test results. All audit documents and test results become material for the panel meeting of the SPPT SNI LSPro-Pustan Department of Industry. The LSPro-Pustan will clarify the relevant company or producer after the panel meeting is over. If all of the conditions are fulfilled, the LSPro-Pustan Deperin will issue the SPPT SNI for the applicant's product.

Halal certificate is a written fatwa from the Indonesian Ulema Council (MUI) which states the halal status of a product in accordance with Islamic sharia. This Halal Certificate is a prerequisite for obtaining permission to put HALAL LABEL on the product packaging from the authorized government agency.

CHAPTER 6

CONCLUSION

In conclusion, the product is a way to develop Pomelo Orange as an alternative to barbecue sauce. Products are products that are made to maintain a healthy body, through the benefits of pomelo orange. The material used is also unique because it is rarely used by people. This product has the potential for new innovations.

Pomelo orange has a sweet taste, but is rich in vitamins, minerals and fiber. Useful for weight loss, and preventing diabetes. This product also has natural sugar as the body's energy. Has a number of vitamins for the body. And beneficial for maintaining intestinal health.

Pomelo orange are not new to society, but are only known as traditional foods. People who often use sweet potatoes as food. Because it tastes sweet, and is liked by many people. With a 2-month study, safe and safe birth products for young children.

With a price of Rp. 51,720. children can enjoy the benefits of sweet potato very much. And use duku as a new product ingredient for innovation.

SUGGESTION

1. maintain product quality and ingredients for making Pomelo Barbecue Sauce.
2. consumers should be educated a little about this product because it can be said that this product is a new product for everyone
3. Price adjustments for Pomelo Barbecue Sauce for sale because these brownies are quite high.

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APPENDIX

A. DESIGN PACKAGING



Picture 34. Design Packaging.



Picture 35. Design Packaging.

B. SUPPLIER LIST

1. Pomelo orange
Pomelo orange that use is from Hokky Graha Family that located at Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60226.
2. Tomatoes
Tomatoes that use is from Papaya Darmo Permai Selatan that located at Jl. Raya Darmo Permai Selatan No.3, Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60187.
3. Paprika
Paprika that use is from Papaya Darmo Permai Selatan that located at Jl. Raya Darmo Permai Selatan No.3, Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60187.
4. Butter
Butter that use is from Arvian that located at Plaza Graha Famili, Ruko, Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60226
5. Lemon
Lemon that use is from Papaya Darmo Permai Selatan that located at Jl. Raya Darmo Permai Selatan No.3, Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60187.
6. Honey
Honey that use is from Hokky Graha Family that located at Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60226.
7. Soy sauce
Soy sauce that use is from Hokky Graha Family that located at Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60226.
8. Fresh pepper
Fresh pepper that use is from Ranch Market that located at Jl. Mayjen Yono Suwoyo No.40, Babatan, Kec. Wiyung, Kota SBY, Jawa Timur 60227.

9. Garlic

Garlic that use is from Ranch Market that located at Jl. Mayjen Yono Suwoyo No.40, Babatan, Kec. Wiyung, Kota SBY, Jawa Timur 60227.

10. Jar

Jar that use is from Cafe Glass HR Muhammad that located at Jl. Mayjen HR. Muhammad No.336, Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60226.

11. Sticker

Sticker that use is from Spectrum Darmo that located at Jl. Raya Darmo Permai II No.56, Pradahkalikendal, Kec. Dukuhpakis, Kota SBY, Jawa Timur 60187.

C. LOGO PICTURES, PRODUCT (BEFORE AND AFTER PACKAGING)



**START HEALTHY
LIVING FROM NOW**

INGREDIENT:
POMELO, TOMATO, PEPPER,
PAPRIKA, LEMON JUICE, HONEY,
SOY SAUCE, GARLIC

POMELO BBQ

Nutrition Facts	
8 servings per container	
Serving size	(13g)
Amount Per Serving	
Calories	45
% Daily Value*	
Total Fat 1g	1%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 10g	4%
Dietary Fiber 0g	0%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 1g	2%

Not a significant source of vitamin D, calcium, iron, and potassium

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Picture 36. Logo Picture



Picture 37. Before Packaging.



Picture 38. After Packaging.