

## CHAPTER IV

### RESULT AND DISCUSSION

#### 4.1 Product Result

This Pa'Piong Sausage has a good shape and has an interesting aroma. However, there are some problems with taste. In terms of taste, most of the panelists seem to like products with a less spicy and less salty taste. They stated that the texture of this Pa'Piong Sausage was not enough chewy. In addition, in terms of smell, all panelists give a good feedback.

#### 4.2 Nutrient Facts

##### 4.2.1 Nutrition Table

The nutritional value of Pork Meat is as follows

**Table 4. 1** Nutrition Value of Pork Meat per 100 gr

Calorie (kcal)	271
Fat (g)	17.04
Carbohydrates (g)	0
Protein (g)	27.34
Sodium (mg)	384
Cholesterol (mg)	90
Potassium (mg)	351

Pork Meat is also contain 2 mcg Vitamin A, 0.3 mcg Vitamin C, 25 mg of calcium, and 1.09 mg iron.

The nutrition value of Miana Leaves is as follows

**Table 4. 2** Nutrition Value of Miana Leaves per 100 gr

Calorie (Kcal)	51.70
Fat (g)	0
Protein (g)	3.29
Carbohydrate (g)	9.62
Fiber (g)	0

Miana leaves treatment of phlegm cough with miana leaf extract in vitro (effective dose of miana leaf extract as an expectorant and antibacterial agent causing cough with phlegm) (Pakadang et al, 2020).

The nutrition value of Katokkon Chili is as follows

**Table 4. 3** Nutriron Value of Katokkon Chili per 100 gr

Calorie (Kcal)	102.4
Vitamin C (mg)	16.84
Fat (g)	14.2
Carbohydrate (g)	19.68
Protein (g)	13.46

Katokkon Chili is also contain 978 mg sodium, 26 mcg Vitamin A, 629 mcg potassium, 65 mg calcium, and 5.7 g sugar.

#### 4.2.2 Nutrition Calculation

The nutrition value of ingredients used in the recipe for Pa’Piong Sausage

**Table 4. 4** Nutritional Value of Ingredients used in The Recipe for Pa’Piong Sausage

<b>Ingredients</b>	<b>Calories (kcal)</b>	<b>Carbohydrate (g)</b>	<b>Protein (g)</b>	<b>Fat (g)</b>	<b>Fiber (g)</b>	<b>Sodium (g)</b>
Pork Meat (70g)	189.7	0	19.14	11.92	0	0
Pork Fat (30g)	191.4	0	1.9	20.31	0	0.05
Corn Starch (10g)	37.5	8.75	0	0	0	0
Mayan Leaf (15g)	7.7	0	0.4	0	0	0
Katokkon Chili (10g)	10.24	1.9	1.3	1.4	0	0.09
Pork Sus Cassing (15g)	27.3	0	1.1	2.4	0	0.03
Garlic (7g)	10.43	2.3	0.44	0.03	0	0.01
Shallots (15g)	10.8	2.52	0.37	0.01	0	0.01
Lemongrass (5g)	4.75	1.21	0.09	0	0	0.29
Scallions (7g)	2.24	0.51	0.12	0	0	0.01
Oil (30g)	265.2	0	0	30	0	0

Beef	20	0	1	0	0	0
Powder (5g)						
Salt (5g)	0	0	0	0	0	2.32
<b>TOTAL</b>	<b>777.26</b>	<b>17.19</b>	<b>25.86</b>	<b>66.07</b>	<b>0</b>	<b>2.81</b>

### 4.2.3 Nutrition Lable

<b>Nutrition Facts</b>	
3 servings per container	
<b>Serving size</b>	<b>1 (60g)</b>
<b>Amount Per Serving</b>	
<b>Calories</b>	<b>260</b>
% Daily Value*	
<b>Total Fat</b> 33g	<b>42%</b>
Saturated Fat 0g	<b>0%</b>
<i>Trans</i> Fat 0g	
<b>Sodium</b> 0mg	<b>0%</b>
<b>Total Carbohydrate</b> 6g	<b>2%</b>
Dietary Fiber 0g	<b>0%</b>
Total Sugars 0g	
Includes 0g Added Sugars	<b>0%</b>
<b>Protein</b> 9g	<b>18%</b>
<small>Not a significant source of cholesterol, 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>	

**Figure 4. 1** Nutrition Fact of Pa'Piong Sausage

## 4.3 Food Safety and Packaging

### 4.3.1 Processing and Storage Temperature

The process of making Pa’Piong sausage is divided into two parts, the first is making the sausage itself, which take small part of time. The second is processing Pa’Piong sausage into fully cooked product, by using smoking method which take approximately 2-3 hours.

Like many other sausage products, Pa’Piong sausage is best stored in freezer, sealed, and dry conditions to maintain its quality and extend its shelf life. Pa’Piong sausage can be stored in room temperature for 18 hours by putting it inside a closed lunch box. The use of the lunch box here aims to keep this Pa'Piong sausage from being exposed to excess air. This prevents the product from spoiling quickly due to erratic humidity.

### 4.3.2 Shelf Life

All sausages - except dry sausages - are perishable and should therefore be stored in the refrigerator or frozen. Raw fresh sausage can be stored in the refrigerator for one to two days; once cooked, store for three to four days in the refrigerator (40°F or less). Hard or dry sausages (such as Genoese pepperoni and salami), whole and unopened, can be stored indefinitely in the refrigerator or up to six weeks in the pantry. Once opened, refrigerate for 3 weeks. (USDA, 2023)

After the sausages are purchased, they may be refrigerated for 1 to 2 days - the "sell-by" date on the package may expire during that storage period, but the sausages will remain safe to use after the sell-by date if they have been properly stored. Unopened raw sausages may be kept in their original store packaging when refrigerating; to maximize the shelf life of sausages, do not open the package until ready to use. Bacteria grow rapidly at temperatures between 40 °F and 140 °F; Sausages should be discarded if left out for more than 2 hours at room temperature.

You can maximize the shelf life of Pa’Piong sausages that have been open in the freezer by overwrapping the original store packaging with airtight heavy-duty aluminium foil, plastic wrap, or freezer paper or placing the package inside a heavy-duty freezer bag in order to prevent freezer burn. Properly stored, they will maintain the best quality for about 1 to 2 months, but will remain safe beyond that time. The freezer time shown is for best quality only - sausages that have been kept constantly frozen at 0°F will keep safe indefinitely.

### **4.3.3 Product Packaging**

Food packaging has evolved from simply a container to hold food to something today that can play an active role in food quality. Many packages are still simply containers, but they have properties that have been developed to protect the food. These include barriers to oxygen, moisture, and flavors. Active packaging, or that which plays an active role in food quality, includes some microwave packaging as well as packaging that has absorbers built in to remove oxygen from the atmosphere surrounding the product or to provide antimicrobials to the surface of the food. Packaging has allowed access to many foods year-round that otherwise could not be preserved. It is interesting to note that some packages have actually allowed the creation of new categories in the supermarket. Examples include microwave popcorn and fresh-cut produce, which owe their existence to the unique packaging that has been developed (ACS, 2009). Today, packaging of food offers an active part in food quality and has progressed from basically a container to contain food which is convenient from harvesting to marketing of foods (Versino, 2023). Certainly! Here's a revised version of the description:

For the packaging of Pa'Piong sausage, we have planned a two-layered approach to ensure the highest quality and effective marketing of our product. The primary packaging will consist of a vacuum-sealed layer, which serves as the first line of defense against contamination from the external environment. This vacuum seal will preserve the freshness and quality of the sausage by removing air and minimizing the risk of spoilage. Additionally, the primary packaging will be heat resistant, providing convenience to customers as it can withstand high temperatures during cooking.

Both the primary and secondary packaging will adhere to strict food-grade standards, guaranteeing that they are safe for direct contact with food and do not introduce any harmful substances. The secondary packaging, which will be the face of our product, will feature essential elements to inform and entice consumers.

By employing a combination of vacuum-sealed primary packaging and informative secondary packaging, we prioritize the safety, freshness, and convenience of Pa'Piong sausage while effectively conveying essential information and maximizing the product's market appeal.

Vacuum Bag is a method of making composite specimens by pressing using an airtight bag to press a laminate of gelcoat, fiber and other layers on the mold until the layers coalesce as a structural composite material. The Vacuum Bag uses atmospheric pressure as a clamp to press the laminate layers together with equal pressure. The laminate is sealed in an airtight bag. The bag is an airtight mold on one side and an airtight bag on the other.



**Figure 4. 2** Vacuum Sealer Bags





**Figure 4. 3** Secondary Packaging

The packaging label for the Pa'Piong Sausage includes information; such as product name, product excellences, ingredients, nutrition fact table.



**Figure 4. 4** Logo Product



Figure 4. 5 Packaging Label

## 4.4 Financial Aspects

### 4.4.1 Product Cost

Product cost is calculated based on the total of all cost per month (31 Days). The costs consist of raw material cost, packaging cost, and utility cost. The raw material cost is, is counted as 10 recipes per day

1. Start-Up Capital

**Table 4. 5** Start-Up Capital

<b>Tools and Equipment</b>	<b>Quantity</b>	<b>Price (/unit)</b>	<b>Sub Total</b>
Digital Scale	1	Rp. 199.000,00	Rp. 199.000,00
Knife	2	Rp. 124.000,00	Rp. 248.000,00
Needle	5	Rp. 5.000,00	Rp. 5.000,00
Cutting Board	2	Rp. 49.900,00	Rp. 99.800,00
Spoon	10	Rp. 1.000,00	Rp. 10.000,00
Piping Bag	20	Rp. 350,00	Rp. 7.000,00
Food String	2	Rp. 3.200,00	Rp. 6.400,00
Smoker	1	Rp. 500.000,00	Rp. 500.000,00
Portable Gas Torch	1	Rp. 50.500,00	Rp. 50.500,00
Plastic Spatula	3	Rp. 16.500,00	Rp. 49.500,00
Pan	2	Rp. 69.000,00	Rp. 138.000,00
Spice Blender	1	Rp. 95.000,00	Rp. 95.000,00
Portable Gas Stove	1	Rp. 204.900,00	Rp. 204.900,00
Vacuum Sealer	1	Rp. 249.000,00	Rp. 249.000,00
Mixing Bowl	5	Rp. 35.000,00	Rp. 175.000,00
<b>TOTAL</b>			<b>Rp.2.037.100,00</b>

## 2. Packaging Cost

**Table 4. 6** Packaging Cost

<b>Packaging</b>	<b>Quantity</b>	<b>Price (/unit)</b>	<b>Sub Total</b>
Vacuum Sealed Bag	10	Rp. 865,00	Rp. 8.650,00
Secondary Packaging	10	Rp. 750,00	Rp. 7.500,00
Sticker Logo	10	Rp. 600,00	Rp. 6.000,00
Sticker Label	10	Rp. 250,00	Rp. 2,500,00
Plastic Bag	10	Rp. 100,00	Rp, 1.000,00
<b>TOTAL (/day)</b>			Rp. 25.650,00
<b>TOTAL (/month)</b>			Rp. 795.150,00

## 3. Utility Cost

**Table 4. 7** Utility Cost

<b>Facility</b>	<b>Quantity</b>	<b>Price (/unit)</b>	<b>Sub Total</b>
Water	3 m <sup>3</sup>	Rp. 2.000,00	Rp. 6.000,00
Electricity	5 kWh	Rp. 2.500,00 (kWh)	Rp. 12.500,00
Coconut Shell	250g	Rp. 1.000,00	Rp. 1.000,00
Charcoal	100g	Rp. 2.000,00	Rp. 2.000,00
<b>TOTAL (/day)</b>			Rp. 21.500,00
<b>TOTAL (/month)</b>			Rp.666.500,00

4. Labour Cost

**Table 4. 8** Labour Cost

<b>Occupation</b>	<b>Personnel</b>	<b>Salary(/month)</b>	<b>Sub Total</b>
Chef	1	Rp. 1.500.00,00	Rp. 1.500.000
<b>TOTAL</b>			<b>Rp. 1.500.000</b>

5. Raw Material Cost

**Table 4. 9** Raw Material Cost

<b>Ingredients</b>	<b>Quantity</b>	<b>Price (/unit)</b>	<b>Sub Total</b>
Ground Pork Meat	700 gr	Rp 120.000,00 /kg	Rp. 84.000,00
Pork Fat	300 gr	Rp. 50.000,00 /kg	Rp. 15.000,00
Corn Starch	100 gr	Rp. 22.000 /kg	Rp. 2.200,00
Mayana Leaf	150 gr	Rp. 15.000,00 /300gr	Rp. 7.500,00
Katokkon Chili	100 gr	Rp. 85.000,00 /kg	Rp. 8.500,00
Pork Cassing	Sus 200 cm	Rp. 5.000,00 /100cm	Rp. 10.000,00
Bamboo	200 cm	Rp. 10.000,00 /100cm	Rp. 20.000,00
Garlic	70 gr	Rp. 3.500,00 /100gr	Rp. 2.450,00
Shallots	150 gr	Rp. 4.500,00 /100gr	Rp. 6.750,00
Lemongrass	50 gr	Rp. 2.500,00 /100gr	Rp. 1.250,00

Scallions	70 gr	Rp. 2.500,00	Rp. 1.750,00
		/100gr	
Oil	300 gr	Rp. 42.500,00	Rp. 12.750,00
		/1000gr	
Beef Powder	50 gr	Rp. 3.500,00	Rp. 7.000,00
		/100gr	
Salt	50 gr	Rp. 2.000,00	Rp. 1.000,00
		/100gr	
<b>TOTAL (/Day)</b>			Rp. 180.150,00
<b>TOTAL (/Month)</b>			Rp. 5.584.650,00

6. Total cost

Fixed Cost = Labour Cost

Variable Cost = Raw Material, Packaging, Utility  
Cost

Total Cost (/month) = Raw Material + Packaging +  
Utility + Labour Cost

= Rp. 5.584.650,00+ Rp.  
795.150,00 + Rp.666.500,00+  
Rp. 1.500.000,00

= Rp. 8.546.300,00

#### 4.4.2 Selling Price

$$\begin{aligned} \text{Product Price} &= \frac{\text{Total Cost (/month)}}{\text{Total Product Units (/month)}} \\ &= \frac{\text{Rp. 8.546.300,00}}{310} \\ &= \text{Rp. 27.568,70} \\ &= \text{Rp. 28.000,00} \\ \text{Product Selling Price} &= \text{Product Price} + (\text{product price} \times \text{profit percentage}) \\ &= \text{Rp. 28.000} + (\text{Rp. 28.000} \times 40\%) \\ &= \text{Rp. 28.000} + \text{Rp. 11.200} \\ &= \text{Rp. 39.200 / Package} \\ &= \text{Rp. 40.000,00/ Package} \end{aligned}$$