

CHAPTER IV

RESULT AND DISCUSSION

4.1 Product Result

As a result, this sate padang is made with plant-based main ingredients, which is proven healthier than sate padang with meat. The main ingredients used are oyster mushrooms and dry mushroom stalks which are processed in such a way that they are close to the texture of meat. Wilmar (2020) states that oyster mushrooms contain as much as 2.48% protein, 59% carbohydrates, 1.56% fiber, 0.17% fat. Furthermore, 100 g of fresh oyster mushrooms include 8.9 mg of calcium, 1.9 mg of iron, 0.15 mg of B vitamins, 0.75 mg of vitamin B2, 12.40 mg of vitamin C, and 35 calories. White oyster mushroom (*Pleurotus ostreatus*) is one of the wood mushrooms with higher nutritional value than vegetables and fruits. White oyster mushroom (*Pleurotus ostreatus*) is a highly healthy non-cholesterol food item that is currently in high demand among people of all socioeconomic backgrounds. In one vegetarian Sate Padang recipe can produce 12 skewers Padang which is 2 servings. while one recipe of the sauce is enough for 5 servings.

Based on the sensory test that has been done, 4 from 10 panelists don't like the texture because it's not as firm as the original meat. However, most of the panelists are keen with the sight, smell and taste. Some even say it tastes good. Mushrooms that are blended into a mixture on its own are not enough to get a firm texture, it is necessary to add binding agents, namely tapioca starch and egg whites. The amount of the binding agents can be increased as well in order to achieve a chewier texture.

4.2 Nutrition Facts

4.2.1 Nutrition Table

The nutrition value of Oyster Mushroom and Shitake Mushroom stalk are shown in the table 4.1 and 4.2

Table 4.1 Nutrition Value of Oyster Mushroom per 100 g

Nutrient content	Content
Energy (cal/100g)	35
Fiber (g/100g)	3.5
Water (g/100g)	89.2
Fat (g/100g)	1.41
Sodium (/100g)	1
Protein (g/100g)	13.8
Carbohydrate (g/100g)	61.7

(Saragih, 2014) and USDA Food Data Central, 2021

Table 4.2 Nutrition Value of Shitake Mushroom Stalk per 100 g

Nutrient content	Content
Energy (cal/100g)	44
Fiber (g/100g)	4.2
Water (g/100g)	88.6
Fat (g/100g)	0.2
Sodium (/100g)	1
Protein (g/100g)	2.41
Carbohydrate (g/100g)	8.17

USDA Food Data Central, 2021

4.2.2 Nutrition Calculation

Below is some data that has been collected about the average nutritional value of Sate Padang Vegetarian, which is as follows:

Table 4.3 Nutrition Calculation of Mushroom Meat

Ingredients	Calories (kcal)	Carbohydrate (g)	Protein (g)	Fat (g)	Sugar (g)	Fiber (g)	Sodium (mg)
Oyster mushrooms (230 g)	80	14.79	7.68	1.01	2.55	5.5	41
Shiitake mushroom stalks (150 g)	84	21.58	2.34	0.33	6.12	3.2	6
Mushroom powder (1/2 tbsp)	10	1	0.15	0.25	-	-	75

White pepper (1/4 tsp)	2	0.41	0.06	0.01	-	0.2	-
Tapioca flour (1 tbsp)	54	13.35	-	-	-	-	2
Garlic powder (1/2 tsp)	5	1.02	0.24	0.01	0.34	0.1	-
Onion powder (1/2 tsp)	4	0.97	0.12	0.01	0.43	0.1	1
Turmeric (2 cm)	8	1.43	0.17	0.22	0.07	0.5	1
Ginger (2 cm)	1	0.36	0.04	0.02	0.03	-	-
Candlenut (5 pcs)	96	6.1	3.6	33.8	2	3.7	2.5
Galangal (2 cm)	1	-	-	-	-	-	-
Salt (½ tsp)	-	-	-	-	-	-	1163
Margarine (2 tbsp)	180	-	-	22	-	-	240
Sweet soy sauce (1 tbsp)	60	15	-	-	13	-	400
Egg white (1 pc)	17	0.24	3.6	0.06	0.23	-	55
Total (12 pcs)	602	76.25	18	57.72	24.77	13.3	1986.5
Total /serving	301	38.13	9	28.86	12.4	6.65	993.25

Table 4.4 Nutrition Calculation of Sate Padang Sauce

Ingredients	Calories (kcal)	Carbohydrate (g)	Protein (g)	Fat (g)	Sugar (g)	Fiber (g)	Sodium (mg)
Curly chili (7 pcs)	35	2.71	1.85	1.96	0.79	0.8	-
Candlenut (3 pcs)	64	1.9	1.1	10.5	0.6	1.2	0.8

Turmeric (2 cm)	8	1.43	0.17	0.22	0.07	0.5	1
Ginger (2 cm)	1	0.36	0.04	0.02	0.03	-	-
Galangal (2 cm)	1	-	-	-	-	-	-
Lime leaves (5 pcs)	3.2	0.8	0.1	0.1	-	0.3	0.3
Lemongrass (1 pc)	25.1	6.5	0.5	0.1	-	-	1.5
Bay leaf (3 pcs)	1.9	0.5	0.1	0.1	-	0.2	0.2
Salt (1 tsp)	-	-	-	-	-	-	2325
Mushroom powder (1 tbsp)	20	2	0.3	0.5	-	-	150
Ground peanuts (2 tbsp)	182	5.36	8.57	13.9	-	5.4	145
Cumin (1/2 tsp)	4	0.46	0.19	0.23	0.02	0.1	2
Coriander (1/2 tsp)	3	0.49	0.11	0.16	-	0.4	-
Cloves (5 pcs)	3	0.61	0.06	0.2	0.02	0.3	2
Star anise (5 pcs)	3	0.5	0.18	0.16	-	0.1	-
Pepper (1/4 tsp)	2	0.41	0.06	0.01	-	0.2	-
Total (5 portions)	356.2	24.03	13.33	28.2	1.53	9.5	2627.8
Total /serving	71.24	4.8	2.6	5.64	0.3	1.9	525.56

4.2.3 Nutrition Label

Nutrition Facts	
1 servings per container	
Serving size	6 pcs (198g)
Amount Per Serving	
Calories	370
<small>% Daily Value*</small>	
Total Fat 34g	44%
Saturated Fat 0g	0%
<i>Trans</i> Fat 0g	
Sodium 1520mg	66%
Total Carbohydrate 43g	16%
Dietary Fiber 9g	32%
Total Sugars 13g	
Includes 0g Added Sugars	0%
Protein 12g	24%
<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 Vegetarian Sate Padang

4.3 Food Safety and Packaging

4.3.1 Processing and Storage Temperature

There are various steps involved in making vegetarian sate padang. Every process is carried out to generate a texture and taste that everyone loves. Not only does the cooking procedure need to be precise, but so do the ingredient ratios and amounts. the process begins by making mushroom meat from oyster mushrooms and shitake mushroom stems, these two mushrooms will be roughly blended with a little water. then, squeezed using a cloth filter to reduce the water content, this process takes overnight so that the water is reduced to the maximum. As a note, 1/3 of the oyster mushrooms are separated to be shredded so that you can still feel the texture of the flesh when you bite into it. The next step is to combine all of the ingredients and work them together until they form a dough.

After that, the dough is divided into several parts, shaped and then steamed for 15 minutes. This heating process aims to deactivate enzymes which will change the color, taste and nutritional value. Steaming is carried out using water temperatures greater than 66°C and lower than 82°C. The longer the meat are steamed, the higher the meats' water content will be (Subekti, Camellia, Rahmawati, et al., 2022). The result is a compact meat texture because the water content is reduced during the steaming process (Rahayu *et al.*, 2022). Then, the mushroom meat must be allowed to cool and finally cut into small cubes. Sautee the mushroom meat with ground spices to add flavor. finally, skewered and grilled. Once grilled, vegetarian Padang satay is recommended to be eaten straight away. but if it is not grilled yet, it can be stored in the refrigerator at 1- 4°C.

While the process for the Padang satay sauce, the spices that have been prepared are blended and then sautéed with aromatics until cooked. Pour some water and make it thick using a slurry of tapioca flour.

4.3.2 Shelf Life

Storing food is done so that it has a long shelf life by preventing the food from spoiling. Food spoilage is influenced by various factors, namely temperature, humidity and dryness, air and oxygen, light and time (D.A Sari, 2013). Sate Padang is classified as wet food because it served with the sauce. it is highly recommended to eat it immediately because this food cannot last long at room temperature. According to D.A Sari (2013), food is stored at low temperatures to slow food spoilage or enzymatic processes caused by microorganisms. Usually, this storage is carried out in the refrigerator with a temperature setting of 5 °C or lower, and the food temperature in the freezer is -16 °C. The placement of food in the refrigerator must also be considered, raw food ingredients are placed at the very bottom, while cooked foods are at the very top.

4.3.3 Product Packaging

Packaging is one of the most important aspects of selling a product. Packaging plays a vital role because it is always associated with the packed item while also serving as a selling point and product image. When attractive packaging adds value to the finished product, its selling value rises. While the product image is related to the product image in the eyes of consumers, it will be better if the product is well packaged, in other words, the product can offer consumers a pleasant impression. Many identical products are created on the market by foreign corporations that dominate the local market by outperforming Indonesian MSME products. The reason for this is because local product packaging does not pique local interest and is regarded as unsanitary. In fact, no matter what the product, if it is well packaged, it will add value to the product (Mashadi & Munawar, 2021).

Sate Padang is a local food that is usually served on a plastic plate covered with banana leaves. Since sate padang is a ready-to-eat food that is served immediately when an order is placed, it is recommended to eat it immediately while it is still warm. However, it would be more effective if the packaging used for sate padang could be for those who want to eat directly or for those who wanted to take away. Therefore, plastic cup cups will be very suitable as packaging because they are very easy to carry around. when the consumer is full, simply snap on the lid and take it away. The sauce from Sate Padang itself will be wrapped in separate plastic so that it can be poured whenever the consumer wants to eat it. According to Irawan and Superni (2013), use plastic products that are registered according to their intended use. Pay attention to temperature and grease or oil when using plastic. Avoid placing hot food ($> 80^{\circ}\text{C}$) in plastic.



Figure 4.2 Packaging for Vegetarian Sate Padang





Figure 4.3 Label on the cup



Figure 4.4 Logo

4.4 Financial Aspects

4.4.1 Product Cost (Variable Cost, Overhead Cost, Fixed Cost)

Product cost is calculated based on the total of all cost per month. The costs consist of labour cost, raw material cost, packaging cost, and utility cost. The labour cost is considered based on monthly working days, which are 26 days per month. As for raw material, the quantity of raw materials is counted as 25 recipes per day or 650 recipes per month for the mushroom meat and 10 recipes per day or 260 recipes per month for the sauce, which are 50 portions per day or 1.300 portions per month.

1. Start-Up Capital

Table 4. 1 Start-Up Capital

Tools and Equipment	Quantity	Price (/unit)	Sub Total
Large bowl	2	Rp 44.500	Rp 89.000
Small bowl	2	Rp 19.000	Rp 38.000
Measuring spoon	1	Rp 15.000	Rp 15.000
Blender	1	Rp 310.000	Rp 310.000
Cloth filter	1	Rp 5.500	Rp 5.500
Steamer	1	Rp 55.000	Rp 55.000
Silicon spatula	1	Rp 13.000	Rp 13.000
Knife	1	Rp 187.000	Rp 187.000
Cutting board	1	Rp 135.000	Rp 135.000
Tong	1	Rp 22.500	Rp 22.500
Sauce pan	1	Rp 150.000	Rp 150.000
Frying pan	1	Rp 230.000	Rp 230.000
Digital scale	1	Rp 75.000	Rp 75.000
Grill pan	1	Rp 88.000	Rp 88.000
Cooking brush	1	Rp 16.000	Rp 16.000
Strainer	1	Rp 11.000	Rp 11.000
Measuring cup	1	Rp 17.000	Rp 17.000
Bamboo skewer	8	Rp 11.500	Rp 92.000
Stainless tray	1	Rp 15.000	Rp 15.000
TOTAL			Rp 1.564.000

2. Labour Cost

Table 4. 2 Labour Cost

Occupation	Personnel	Salary (/month)	Sub Total
Chef	1	Rp 4.500.000	Rp 4.500.000
Cook Helper	1	Rp 3.000.000	Rp 3.000.000
Cashier	1	Rp 2.250.000	Rp 2.250.000
TOTAL			Rp 9.750.000

3. Packaging Cost

Table 4. 3 Packaging Cost

Packaging	Quantity	Price (/unit)	Sub Total
Plastic cup	50 pcs	Rp 24.400/50 pcs	Rp 24.400
Sticker (for logo)	50 pcs	Rp 250/ pc	Rp 12.500
Plastic bag	50 pcs	Rp 9.400/54 pcs	Rp 9.400
Sticker (for nutrition label)	50 pcs	Rp 450/pc	Rp 22.500
TOTAL / DAY			Rp 68.800
TOTAL / MONTH			Rp 1.788.800

4. Utility Cost

Table 4. 4 Utility Cost

Facility	Quantity	Price (/unit)	Sub Total
Water	55.000L	Rp 1.700/m ³	Rp 93.500
Electricity	7 kWh	Rp 6.500	Rp 169.000
Gas	12kg	Rp 218.000/12kg	Rp 218.000
TOTAL / MONTH			Rp 480.500

5. Raw Material Cost

Table 4. 5 Raw Material Cost of Mushroom Meat

Raw Materials	Quantity	Price (/unit)	Sub Total
Oyster mushrooms	230 gr	Rp 7.000/200gr	Rp 8.050
Dry mushroom stalks	150 gr	Rp 10.000	Rp 10.000
Mushroom powder	½ tbsp	Rp 25.300/200gr	Rp 950
White pepper	¼ tsp	Rp 31.000/100gr	Rp 150
Tapioca flour	15 gr	Rp 6.000/500gr	Rp 180
Garlic powder	½ tsp	Rp23.700/80gr	Rp 623
Onion powder	½ tsp	Rp 23.760/90gr	Rp 555
Turmeric	2 cm	Rp 500	Rp 500
Ginger	2 cm	Rp 500	Rp 500
Candlenut	5 pcs	Rp 7.000/100gr	Rp 1.050
Galangal	2 cm	Rp 500	Rp 500
Margarine	30 gr	Rp 115.000/2kg	Rp 1.725
White egg	1 pcs	Rp 1.875/butir	Rp 1.875

Sweet soy sauce	15 ml	Rp 23.100/275ml	Rp 1.260
Salt	½ tsp	Rp 4.250/500gr	Rp 18
TOTAL (/12 pcs)			Rp 27.936
TOTAL (/serving)			Rp 13.968
TOTAL (/day)			Rp 698.400
TOTAL (/month)			Rp 18.158.400

Table 4. 6 Raw Material Cost of Sate Padang Sauce

Raw Materials	Quantity	Price (/unit)	Sub Total
Curly chili	7 pcs	Rp 7.040/100gr	Rp 2.347
Candlenut	3 pcs	Rp 6.000/100gr	Rp 600
Turmeric	2 cm	Rp 500	Rp 500
Ginger	2 cm	Rp 500	Rp 500
Galangal	2 cm	Rp 500	Rp 500
Lime leaves	5 pcs	Rp 2.627/20gr	Rp 500
Bay leaves	3 pcs	Rp 3.735/18 pcs	Rp 1.870
Salt	1 tsp	Rp 4.250/500gr	Rp 36
Mushroom powder	1 tbsp	Rp 25.300/200gr	Rp 1.900
Ground peanuts	2 tbsp	Rp 39.000/1000gr	Rp 1.170
Cumin	½ tsp	Rp 7.000/32gr	Rp 547
Coriander	½ tsp	Rp 4.800/25gr	Rp 480
Cloves	4-6 pcs	Rp 9.000/50gr	Rp 100
Star anise	4-6pcs	Rp 16.000/100gr	Rp 800
White pepper	¼ tsp	Rp 31.000/100gr	Rp 150
Lemongrass	1 pcs	Rp 4.320/200gr	Rp 648
TOTAL (/5 portion)			Rp 12.648
TOTAL (/serving)			Rp 2.530
TOTAL (/day)			Rp 126.500
TOTAL (/month)			Rp 3.289.000

$$\begin{aligned}
 \text{Total Raw Material Cost} &= \text{Rp } 18.158.400 + 3.289.000 \\
 &= \text{Rp } 21.447.400
 \end{aligned}$$

6. **Total Cost**

Fixed Cost = Labour Cost

Variable Cost = Raw Material Cost, Packaging Cost, and
Utility Cost

Total Cost (/month) = Labour + Raw Material +
Packaging + Utility
= Rp 9.750.000 + Rp 21.447.400 + Rp
1.788.800 + Rp 480.500
= **Rp 36.436.700**

4.4.2 **Selling Price**

Product Price = $\frac{\text{Total Cost (/month)}}{\text{Total Product Units (/month)}}$
= $\frac{\text{Rp 36.436.700}}{1.300}$
= **Rp 28.029**

Selling Price = Rp 28.500
= Rp 28.500 x (28.500 x 30%)
= Rp 28.500 + Rp 8.550
= Rp 37.050 = **Rp 37.500**