

CHAPTER IV

RESULT AND DISCUSSION

4.1 Product Result

The nutritional value of kepok banana tape spread depends on its ingredients. Major ingredients in kepok banana tape spread is kepok banana tape itself. Kepok banana tape, also known as “tape pisang kepok” or “fermented kepok banana,” is a traditional Indonesian delicacy made from ripe kepok bananas. Which in addition to its cultural significance, kepok banana tape also offers some nutritional benefits. Ripe bananas are a good source of vitamins, minerals, and dietary fiber. The fermentation process enhances the bioavailability of nutrients, making them more easily digestible. However, it is important to note that the fermentation process also increases the sugar content, so moderation is key.

Kepok banana itself contains nutrients such as: water 11,23%, ash 11,23%, total fat 2,08%, protein 6,8%, carbohydrate 79,39%, and food fiber 7,6%. Meanwhile, according to kusumaningrum’s research (2017) kepok banana contains water content 10,88%, ash 3,22%, total fat 0%, protein 3,04%, carbohydrate 82,86%, food fiber 15,24%, and potassium 769,09 mg. (*NS Rahayu et al, 2018*).

4.2 Nutrition Fact

4.2.1 Nutrition Table

The nutritional value of kapok banana is as follows:

Table 4. 1 Nutrition Value of Yellow Kepok Banana per 100 g

Calorie (kcal)	121
Carbohydrate (g)	31
Protein (g)	1
Fat (g)	0
Fiber (g)	4
Sugar (g)	17
Potassium (g)	0.487

Source: Anasia Thahira Unggar Anindya et al, 2015

Banana is a fruit that is widely consumed in Indonesia. Based on data from the Central Bureau of Statistics (2017), the total per capita consumption of bananas in Indonesia in 2016 reached 5.89 kg/year, followed by rambutan fruit at 4.38 kg/year and oranges at 3.59 kg/year, with a total annual production 7.17 million tones.

One of the most widely consumed types of bananas is the 11apok banana (*Musa 11apok11siacal*). Kepok banana (*Musa 11apok11siacal*) In addition to its delicious taste, bananas also contain good nutrients. (*Aprilia Indah Pangestika et al, 2020*).

4.2.2 Nutrition Calculation

Table 4. 2 Nutritional Value of Ingredients used in The Recipe for Banana Tape Spread

Ingredients	Calories (kcal)	Carbohydrates (g)	Protein (g)	Fat (g)	Sugar (g)	Fiber (g)	Sodium (mg)
Kepok Banana Tape (250 g)	437,5	97,5	2,5	0,7	42,5	2,5	
Corn syrup (120 ml)	341	93,5		0,2	93,5		77
Tropicana Sugar (30 g)	60	24					
Water (70 ml)							1
Condensed milk (10 ml)	41	7,03	1,02	1,12	7,03		16
TOTAL	879.5	222,03	3,52	2,32	143,03	2,5	94

4.2.3 Nutrition Label

Nutrition Facts	
25 servings per container	
Serving size	(19g)
Amount Per Serving	
Calories	30
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 7g	3%
Dietary Fiber 0g	0%
Total Sugars 6g	
Includes 5g Added Sugars	10%
Protein 0g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 40mg	0%

* 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.

Figure 4. 1 Nutrition Label of Kepok Banana Tape Spread

4.3 Food Safety and Packaging

4.3.1 Processing and Storage Temperature

Kepok Banana Tape Spread is a spread that made from kepok banana tape. Making kepok banana spread consist of various stages starting from the steaming stage for about 20-25 minutes and after that the steamed bananas can be drained and cooled for about 1-2 hours and can proceed to the stage of giving the tape yeast, keep in mind giving the tape is very influential on the results of the tape,

The higher the dose of yeast given to the banana, the higher the alcohol content so that the higher the alcohol in the tape, the faster the tape will be made, but care should be taken not to overdo the dose of tape yeast because it can make tape bitter (*Arsya Gusnita, 2022*). And last stage is fermentation for best result can be fermented for 3 days

maximum with fermentation temperatures between 25-30 degrees celcius (*CR Utami, 2017*).

Next step is make the spread from Banana Tape. The process of making the spread is actually quite easy, starting with mashing the fermented banana tape and then cooking it with additional ingredients such as water, corn syrup as a thickening agent, sweetened condensed milk and Tropicana sugar as a sweetener.

4.3.2 Self Life

Kepok banana tape spread is processed Kepok banana tape which is a processed product of banana tape where banana tape itself is a fermented snack made from carbohydrates found in kapok bananas. According to a journal written by (*Firman Iswahyudi, 2018*) that the level of durability or shelf life of kepok banana tape and how to store it itself is still unknown, so I did my own research at home.

According to the result that I did, this Kepok banana tape spread can be stored within 3 days at room temperature in an unsterile jar with a note that avoid damp rooms, sunlight, and use airtight containers and you can also store it for quite a long time, which is around 10 days in the refrigerator. And lasts up to 1 week in sterile jar, and about 1 month in sterile jars that have not been opened and refrigerated. However, for the best consumption it is recommended within 1-3 days after opening the packaging.

4.3.3 Product Packaging

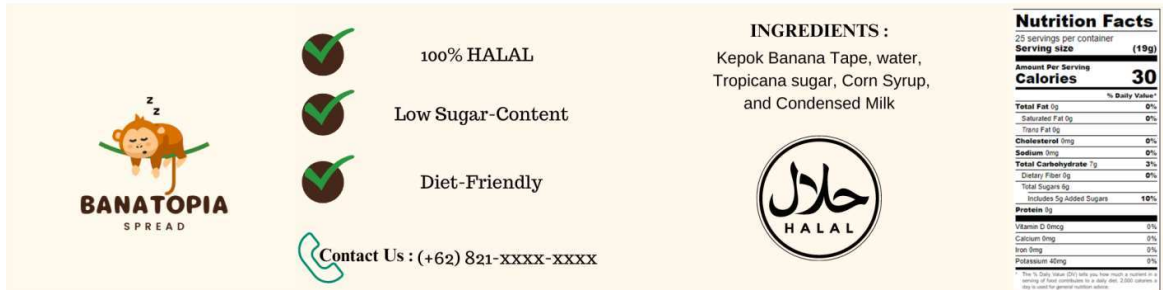
The outermost part that envelops a food item, beverage, or other substance to protect it from damage caused by air, weather, collision, and other factors is referred to as packing or packaging in general. While providing security for a product through packaging, Based on journal (*Siswanto, 2018*). Different types of packaging materials pose

different potential chemical exposures. Glass, for instance, is generally recognized as safe by the FDA when used as a container for holding food. So that's why we use glass jar for our product.

In research that I have done in a journal (Emmy Ermawati, 2019) which says that product packaging that is resistant to high temperatures. In other words, packaging that require heating, pasteurization, and sterilization processes where to store kapok banana tape spread products, it is known that this product is nothing but a fermented product so it really needs sterilization on the packaging. This Kepok Banana Tape Spread can be eaten anywhere and can be anywhere with anything, with this glass jar packaging can be used very well.



Figure 4. 2 Glass Jar 200 ml



BANATOPIA
SPREAD

- 100% HALAL
- Low Sugar-Content
- Diet-Friendly

Contact Us : (+62) 821-XXXX-XXXX

INGREDIENTS :
Kepok Banana Tape, water, Tropicana sugar, Corn Syrup, and Condensed Milk

HALAL

Nutrition Facts	
25 servings per container	
Serving size (19g)	
Amount Per Serving	
Calories	30
% Daily Value*	
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 1g	2%
Dietary Fiber 0g	0%
Total Sugars 0g	
Includes 5g Added Sugars	10%
Protein 0g	
% Daily Value*	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0mg	0%
Potassium 40mg	0%



Figure 4. 3 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 25 days per month. As for raw material, the quantity of raw materials is counted as 20 recipes per day or 500 recipes per month, which are 20 portions per day or 500 portions per month.

1. Start-Up Capital

Table 4. 3 Start-Up Capital

Tools and Equipment	Quantity	Price (/unit)	Sub Total
Stove	1	Rp 450,000	Rp 450,000
Sauce Pan	2	Rp 200,000	Rp 400,000
Colander	2	Rp 15,000	Rp 30,000
Digital Scale	1	Rp 430,000	Rp 430,000
Gastronom	7	Rp 55,000	Rp 385,000
Rubber Spatula	2	Rp 10,000	Rp 20,000
Spoon	10	Rp 1,500	Rp 15,000
Fork	5	Rp 2,000	Rp 10,000
TOTAL			Rp 1,740,000

2. Labour Cost

Table 4. 4 Labour Cost

Occupation	Personel	Salary (/month)	Sub Total
Cook Helper	1	Rp 2,000,000	Rp 2,000,000
TOTAL			Rp 2,000,000

3. Packaging Cost

Table 4. 5 Packaging Cost

Packaging	Quantity	Price (/unit)	Sub Total
Glass Jar 200 ml	20	Rp 3,000 (/pcs)	Rp 60,000
Sticker	20	Rp 1,000 (/pcs)	Rp 20,000
TOTAL (/day)			Rp 80,000
TOTAL (/month)			Rp 2,000,000

4. Utility Cost

Table 4. 6 Utility Cost

Facility	Quantity	Price (/unit)	Sub Total
Water	750L	Rp 2,000 (/m ³)	Rp 1,500
Electricity	15 kWh	Rp 1,500 (/kWh)	Rp 22,500
Gas (3 kg)	3 kg	Rp 20,000 (/kg)	Rp 60,000
TOTAL (/day)			Rp 84,000
TOTAL (/month)			Rp 2,100,000

5. Raw Material Cost

Table 4. 7 Raw Material Cost

Raw Materials	Quantity	Price (/unit)	Sub Total
Kepok Banana	5 kg	Rp 25.000 (/800 gr)	Rp 156,250
Tape Yeast	100 gr	Rp 12.500 (/70 g)	Rp 17, 858
Banana Leaves	45 sheets	Rp 4,000 (/3 sheets)	Rp 60,000
Corn Syrup	2,4L	Rp 120,000 (/1,2 L)	Rp 240,000
Tropicana Sugar	300 gr	Rp 100,000 (/250 g)	Rp 120,000
Condensed Milk	200 ml	Rp 13,900 (/370 ml)	Rp 7,514
TOTAL (/day)			Rp 601,622
TOTAL (/month)			Rp 15,040,550

6. Rent Cost

Table 4. 8 Rent Cost

Facility	Size	Price	Sub Total
Land	15 m x 5 m	Rp 2,500,000	Rp 2,500,000
Building	15 m x 5 m	(/month)	
TOTAL (/month)			Rp 2,500,000

7. Total Cost

Fixed Cost = Labour Cost and Rent Cost

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

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

= Rp 2,000,000 + Rp 15,040,550 + Rp
2,000,000 + Rp 2,100,000 + Rp
2,500,000

= **Rp 23,640,550**

4.4.2 Selling Price

Product Price = $\frac{\text{Total cost (/month)}}{\text{Total Product Units (/month)}}$

= $\frac{\text{Rp 23,640,550}}{500 \text{ portions}}$

= **Rp 47,281.1/portion**

Product Selling Price = Product Price + (Product Price x
Profit Percentage)

= Rp 47,281.1 + (Rp 47,281 x 50%)

= Rp 47,281.1 + Rp 23,640.55

= Rp 70,921.65 = **Rp 71,000**