

THE EFFECT OF THE LEAVEN AGAINST TO QUALITY OF BANANA KEPOK (*Musa paradisiaca* L) TAPAI

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Abstract

Banana (*Musa paradisiaca normalis* linn) is a type of tropical fruit that is very popular, because of it tastes good, is easy to get and the price is relatively cheap, bananas also contain vitamins, minerals and carbohydrates which are quite high. Society in general consumes bananas as a dessert. Therefore, in the context of developing food diversification, processed banana products can overcome the saturation of fresh bananas and increase their shelf life and increase their economic value. Bananas can be processed into various processed products such as dry banana, banana flour, banana jam, banana wine, banana tapai, and banana sauce. Among the processed banana products, fermentation processing that is making banana tapai is an alternative that is not yet well known to the public, but has a pretty good future. The purpose of this study was to analyze the effect of giving different amounts of leaven and to analyze the right amount of leaven in making Kepok banana tapai. This type of research is an experiment with panelist data sources using organoleptic tests. Based on the results of experiments with 4 (four) treatments and 4 (four) quality repetitions which resulted in the color produced from tapai banana kepok is yellowish white the best results in the third treatment (0.35), the aroma of tapai banana produced is typical scented tapai Banana Kepok the best results in the third treatment (0.35% leaven), taste Banana Kepok tapai produced, sweet and taste leaven, the best results in the third treatment (0.35% leaven), and texture of Kepok banana tapai produced was the best soft yield at the third treatment (0.35% leaven).

Keywords: *Kepok Banana, Tapai, Quality*

Introduction

Banana (*Musa paradisiaca normalis* linn) is a type of tropical fruit that is very popular, because besides it tastes good, is easy to get and the price is relatively cheap, bananas also contain vitamins, minerals and carbohydrates which are quite high.



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Bananas consist of several branches including: Cavendish bananas, milk bananas, plantains, Ambon bananas, kepok bananas, horn bananas, jackfruit bananas and golden bananas.

Society in general consumes bananas as a dessert. Therefore, in the context of developing food diversification, processed banana products can overcome the saturation of fresh bananas and increase their shelf life and increase their economic value. Bananas can be processed into various processed products such as banana sale, banana flour, banana jam, banana wine, banana tapai, and banana sauce. Among the processed banana products, fermentation processing that is making banana tape is one alternative that is not yet well known to the public, but has a pretty good future.

The process of making banana tapai is done by sprinkling leaven on the basic ingredients. The amount of leaven sown on the base material to produce a good tape has not been uniform so far. More clearly according to Lingga (1985: 12) states that the addition of excessive amounts of leaven and the closure of the material during fermentation and the long fermentation time can produce tape that feels acidic. Therefore apart from being determined by the quality of leaven, the amount of leaven used plays an important role in making banana tapai.

Method

Based on the background and the formulation of the problem in this study, the type of experimental research, namely conducting a direct experiment with various treatments to the results that are useful for knowing the quality of the *Kepok* banana *tapai* from different treatments. The object of this research is *kepok* banana which is used as raw material while the research variable is the use of different amounts of leaven which are 0.15% (X1), 0.25% (X2), 0.35% (X3) 0.20% (X4) as the independent variable, and banana *tapai* quality (Y), as the dependent variable.

The research treatment was the giving of different amounts of leaven, namely: 0.15% (X1), 0.25% (X2), 0.35% (X3) and 0.20% (X4) as a standard in making *kepok* banana *tapai*. The research trial was conducted once before conducting the main research, which aims to study the making of the *Kepok* banana *tapai*, so that there is no error in research time.

The steps of conducting the research are: (1) the preparation stage which includes the preparation of tools and materials, (2) the preparation phase, (3) the completion stage. While testing the data analysis to determine the best quality of *tapai* banana kepok is to perform ANOVA statistical analysis (Analysis of Variance).

Result and Discussion

The results of research on the color quality of tapai banana can be seen in table 5 as follows:

Table 1 Description of Organoleptic Test Data for Color Quality in Tapai Banana Kepok

Quality	Indicator	Experiments (Tapai Kepok Banana)							
		Repetition 1		Repetition 2		Repetition 3		Repetition 4	
		0,15%		0,25%		0,35%		0,20%	
		P	%	P	%	P	%	P	%
Color	Yellowish White	9	60	12	80.00	15	100	10	66.67
	Pretty Yellowish	5	33.33	3	20.00	-	-	3	20.00

Quality	Indicator	Experiments (Tapai Kepok Banana)							
		Repetition 1		Repetition 2		Repetition 3		Repetition 4	
		0,15%		0,25%		0,35%		0,20%	
		P	%	P	%	P	%	P	%
	White								
	Less Yellowish White	1	6.67	-	-	-	-	2	13.33
	Not Yellowish White	-	-	-	-	-	-	-	-

From the description of organoleptic test data for the color quality of tapai Kepok bananas for the addition of leaven based on the experimental results the highest percentage was found in the third repetition of 15 panelists (100%) stating that the color quality of tapai banana yellowish white. For more details on the description of organoleptic test results can be seen in the following graphic image.

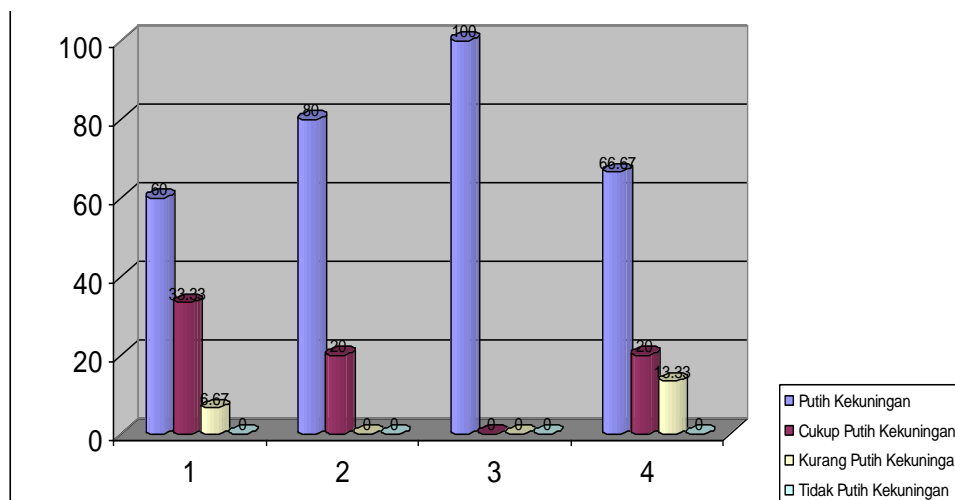


Figure 1. Graph Description of the Color Quality Organoleptic Test Results Tapai Kepok Banana

The results of research on the aroma quality of tapai banana can be seen in table 2 as follows:

Table 2 Description of Organoleptic Test Data on Aroma Quality in Tapai Banana Kepok

Quality	Indicator	Experiments (Tapai Kepok Banana)							
		Repetition 1		Repetition 1		Repetition 1		Repetition 1	
		0,15%		0,25%		0,35%		0,20%	
		P	%	P	%	P	%	P	%
	Typical Tapai Banana Kepok	7	46.67	11	73.33	15	100	9	60.00
Aroma	Fairly Scented Typical Tapai Banana Kepok	4	26.67	3	20.00	-	-	4	26.67



Quality	Indicator	Experiments (Tapai Kepok Banana)							
		Repetition 1		Repetition 1		Repetition 1		Repetition 1	
		0,15%		0,25%		0,35%		0,20%	
		P	%	P	%	P	%	P	%
Less Scented	Typical Tapai Banana Kepok	2	13.33	1	6.67	-	-	2	13.33
Not Scented	Typical Tapai Banana Kepok	2	13.33	-	-	-	-	-	-

From the description of the organoleptic test data for the aroma of tapai banana kepek with the addition of leaven based on the experimental results the highest percentage was found in the third repetition. For more details on the description of organoleptic test results can be seen in the following graph:

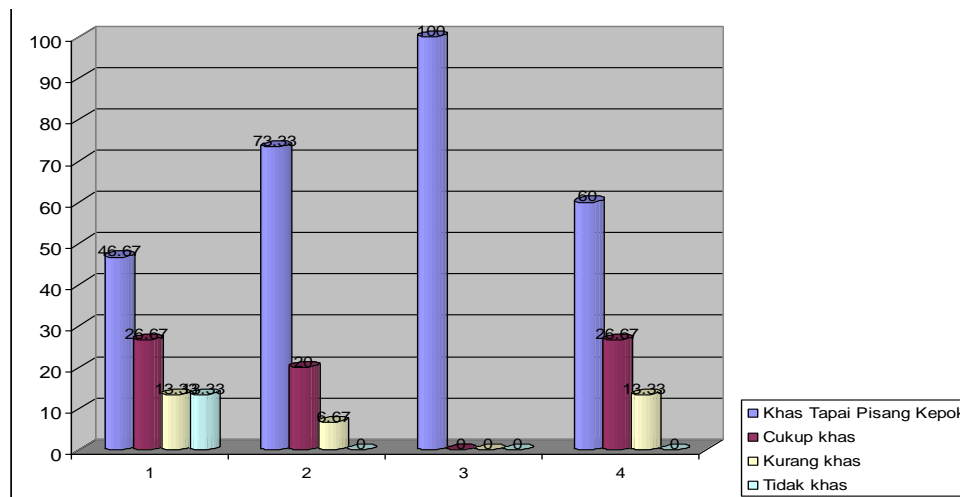


Figure 2. Graph Description Data on Organoleptic Test Results of Aroma Quality in Tapai Banana Kepok

The results of research on the texture quality of tapai banana can be seen in table 2 as follows:

Table 3 Description of Organoleptic Test Data for Soft Texture Quality in Tapai Kepok Banana

Quality	Indicator	Experiments (Tapai Kepok Banana)							
		Repetition 1		Repetition 1		Repetition 1		Repetition 1	
		0,15%		0,25%		0,35%		0,20%	
		P	%	P	%	P	%	P	%
Texture	Soft	8	53.33	12	80.00	15	100	10	66.67
	Soft enough	5	33.33	2	13.33	-	-	4	26.67
	Less Soft	2	13.33	1	6.67	-	-	1	6.67

Not Soft	0	0.00	-	-	-	-	-	-
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From the description of organoleptic test data for the quality of texture of tapai banana kepek with different leavens based on the experimental results, the highest percentage was found in the third repetition, namely 15 panelists (100%) stated the quality of the texture of tapai banana soft kepek. For more details description of test results Organoleptic can be seen in the following graphic image

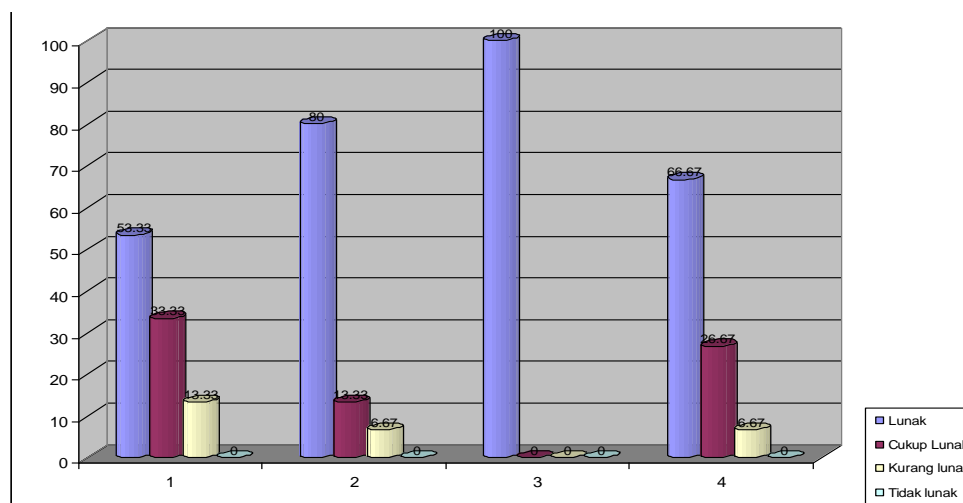


Figure 3. Graph Description Data of Organoleptic Test Results of Soft Texture Quality in Tapai Kepok Banana

The results of research on the taste quality of tapai banana can be seen in table 2 as follows:

Table 4 Description of Organoleptic Test Data for the Quality of Tapai Bananas Taste

Quality	Indicator	Experiments (Tapai Kepok Banana)							
		Repetition 1		Repetition 1		Repetition 1		Repetition 1	
		0,15%	0,25%	0,35%	0,20%				
		P	%	P	%	P	%	P	%
Taste	Manis dan Sedikit Asam	10	66.67	12	80.00	15	100	11	73.33
	Cukup manis dan sedikit asam	3	20.00	3	20.00	-	-	4	26.67
	Kurang manis dan sedikit asam	2	13.33	0	0.00	-	-	0	0.00
	Tidak manis dan sedikit asam	0	0.00	-	-	-	-	-	-

From the description of organoleptic test data for the quality of taste of tapai banana kepek with different leavens based on the experimental results, the highest percentage was found in the third repetition, namely 15 panelists (100%) stated the quality of the



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taste of tapai banana kepok is sweet and a little bit sour. For more details description of test results Organoleptic can be seen in the following graphic image

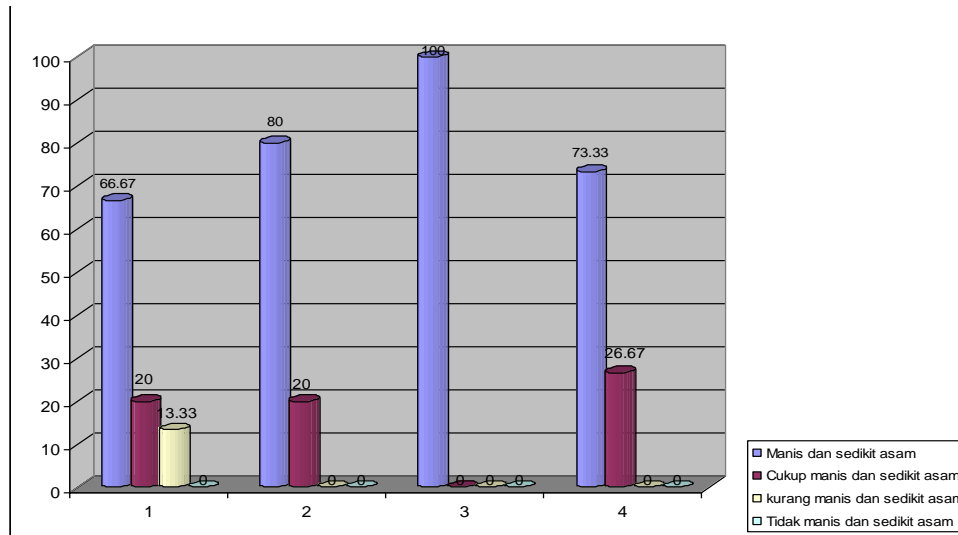


Figure 4. Graph Description of Data on Organoleptic Test Results in Tapai Banana Quality

Conclusion

Based on research that has been done as many as 4 (four) treatments and 4 (four) repetitions, then proceed with organoleptic tests and data analysis can be concluded as follows: The color quality of tapai banana is curry white with the highest percentage that is 100% with the addition of 0.35% leaven that is on the third repetition. The quality of the aroma of tapai banana produced is a typical flavor of tapai banana kepok with the highest percentage of 100%, with the addition of 0.35% leaven on the third repetition. The quality of the texture of tapai banana produced is soft with the highest percentage of 100%, the addition of 0.35% leaven on the third repetition. The quality of taste of tapai banana produced is the highest percentage of sweet and slightly soft acids 100%, the addition of 0.35% leaven on the third repetition

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