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Article

Doposa: Banana Tape Donuts as an Effort to Diversify Food Processes Based on The Local Potential of The Ngawi RegionEmi Zulfa Faridah^{1*}, Firdaus Budi Raharjo², Habibah Nur Malatul Jannah³, Laila Rahmatul Karomah⁴, Mar'atus Soliha⁵^{1,2,3,4,5}Institut Agama Islam Negeri Ponorogo, Ponorogo*Corresponding Address: emizulfa17@gmail.com**Article Info**

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ABSTRACT

Banana fruit in the Ngawi area is only utilized as fresh fruit. Therefore, alternative food preparations made from processed banana fruit are needed, one of which is banana tape donuts, which are made from tape with the basic ingredient. Processed banana fruit, can not only increase the economic value of bananas, but also increase food diversification in Indonesia. The purpose of this research was to characterize and organoleptic properties of banana tape donuts. This research is an experimental research conducted with 2 stages, namely the manufacturing stage and the organoleptic test stage. Organoleptic tests were conducted on 30 panelists consisting of 12 trained panelists, 11 moderately trained panelists and 7 lay panelists (untrained). The data obtained were then analyzed descriptively. Organoleptic test results showed that 63.3% of panelists really liked the taste of DOPESA, 50% of panelists liked the aroma of DOPESA and 55.2% of panelists liked the texture of DOPESA..

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INTRODUCTION

Donuts are a popular type of food in Indonesia that utilizes the microbe *Saccharomyces cerevisiae* for its fermentation process (Ningsih et al. 2022). Donuts are one of the delicious foods that are popular with Indonesian people. The basic ingredients for donuts can be formulated according to the maker's wishes. Donuts generally have a soft, chewy texture and a savory taste. The variety of donut flavors on the market is increasingly diverse and interesting, starting from powdered sugar as a sprinkling on top or liquid chocolate, even fruit jam. Therefore, donut requests do not only come from children but also adults (Swandani et al., 2017). The basic ingredient for making donuts, namely wheat flour, is very easy to find around us. You can also create it according to your wishes.

As an effort to diversify food processing, donuts can be processed according to our wishes by paying attention to their nutritional content. The existence of food diversification helps enrich food processing in Indonesia (Fithriana et al., 2019). Progress in the food

industry has brought many innovations to donut processing. One of them is the use of tape as an ingredient for making donuts. Tape itself is often found in villages as a delicious traditional food. Like donuts, tape also undergoes fermentation in the manufacturing process with the help of yeast (Asyari, Afrianto, and Intan 2016) . In contrast to bacteria, yeast have larger cell sizes, have organs, have a cell nuclear membrane, and DNA is localized in chromosomes in the cell nucleus (Berlian et al., 2016). According to (Kanino 2019) The materials usually used to make tape are materials that contain carbohydrates. Many food ingredients contain carbohydrates, so we can modify the basic ingredients for making tape by using other ingredients such as grains (rice, corn, sorghum), tubers (potatoes, cassava, sweet potatoes, yams) and nuts. Not only tubers, tape can also be made from bananas as the basic ingredient

Bananas as tropical plants are very easy to find in Indonesia. It is stated in several articles that one of the abundant agricultural products is bananas (Fauziah, 2020). Likewise, in the Griya Prandon Permai area, Karangtengah Prandon Ngawi, looking at the fruit commodity yields, the most are bananas. (Muhanifah and Wirawan F., 2021). The Ngawi area itself is an abundant agricultural producing area. Ngawi Regency is a fertile area and is one of the rice buffer areas in East Java (Nurul Istiqomah, et al., 2018). The Central Statistics Agency stated that other leading commodities with large production quantities are siem oranges, bananas and melons with total production above 10 percent. One type of banana that has various cultivars in Indonesia is the Kepok banana (Sitepu 2019). Kepok bananas contain a high source of energy, lots of fiber, protein, and low fat. The texture of Kepok bananas is different from other types of bananas. Stated in his research that the taste of Kepok bananas is better than other bananas (Dirayati et al., 2018).

The abundance of bananas in Ngawi needs to be utilized as well as possible. Banana processing can not only increase the economic value of bananas, but can also increase food diversification in Indonesia (Mulyaningsih et al. 2022). The seasonal nature of banana agricultural materials causes bananas to experience a surplus or excess of bananas during the harvest season, especially in areas that produce this fruit. If use is delayed or not all bananas can be marketed/consumed, they will become overripe and rotten, making them inedible. This causes many bananas to be sold at low prices, and can even be wasted. Therefore, further processing of fresh bananas is needed to prevent this (Indasah et al., 2020)

This research aims to determine the characteristics and organoleptic tests of banana tape donuts. It is hoped that this processing can support food diversification in Indonesia.

METHODS

The research was carried out from October 2022 to December 2022 on Jln. Letjend Suprpto Gg.1 No.18, Ronowijayan Village, Siman District, Ponorogo Regency. This research is experimental research carried out in 2 stages, namely the manufacturing stage and the organoleptic test stage. The organoleptic test was carried out on 30 panelists with the categories of trained, somewhat trained and untrained panelists. Organoleptic tests include taste, texture and aroma of banana tape donut products. The data that has been obtained is then analyzed descriptively.

Material

1. 250 gr banana tape
2. 100 gr wheat flour
3. 6 gr instant yeast
4. 20 gr granulated
5. $\frac{1}{4}$ tsp fermipan
6. 1 egg
7. 90 ml cold water

8. 20 gr margarine
9. 1/2 tsp fine salt

Manufacturing Procedure

A. Banana Tape Making

- 1) Prepare tools and materials.
- 2) Steam the bananas until half cooked.
- 3) Remove the banana and peel off the skin.
- 4) Allow the banana and the steam to completely dissipate.
- 5) Sprinkle the pisang kepok with the yeast until well mixed.
- 6) Wrap the bananas in banana leaves or other wrappers and put the in a jar or container.
- 7) Then cover it tightly and place it in a safe place for two-three days.

B. Donuts Making

- 1) Mix 100 gr of flour, 6 g instant yeast, 20 g sugar and ¼ baking powder. Stir the ingredients until smooth, after flattening add 250 gr banana tape, 1 egg and 90 ml cold water, knead all the ingredients until evenly distributed (flat lumps). Then add 20 gr margarine and ½ tsp fine salt. Knead continuously until elastic.
- 2) Round the dough that has been smooth, then cover with plastic or clean cloth and let it rest until it doubles in size (about 40 minutes).
- 3) Deflate the dough, weigh the dough 50 grams or according to taste. Round it until it's smooth. Then let it rest until it rises (about 15 minutes).
- 4) Heat the cooking oil, then gently press the dough until it is slightly flattened, then perforate the center. Then fry the donuts (medium heat) until browned with one turn.
- 5) Remove and drain the cooked donuts.

RESULTS AND DISCUSSION

Characteristics of Banana Tape Donut

The texture of the tape produced from banana fruit is smooth, soft and tender like tape in general. This is also supported by (Ernawati et al. 2021) which suggests that tape generally has a soft, tender and juicy texture. Tape with a smooth, soft and tender texture is very suitable and suitable for processing into donuts. To improve the quality of tape, it is necessary to add sugar in the fermentation process to improve the quality of tape both in terms of water content, protein, alcohol and organoleptic both in terms of taste, texture and aroma (Gusnita et al. 2022). Likewise, the color of the tape becomes a characteristic yellow color and the color of the donut dough also becomes slightly yellow without coloring. In making banana tape, it does not require special skills, just knowledge and intention to make it so that it is suitable when applied among the community. Banana tape in processing is very easy and can be applied with other ingredients that are found around of course with quality and affordable prices. By making banana tape applied with other ingredients, it is expected to be able to improve and increase nutritional value and utilize local food ingredients in the community, especially in banana tape donuts (Aryani et al., 2022).

We need to know that the processed food derived from banana tape, namely donuts, has a soft and tender texture in general so that it does not affect the processed food, namely donuts. The soft and tender texture of banana tape donuts is influenced by the addition of yeast and fermipan to the donut dough. According to (Anugreni et al. 2020) which suggests that dough that has good growth power will produce donuts with a soft texture, with more yeast and fermipan added, the CO₂ production will be higher so that it will affect the dough's

growth power will also be higher and the resulting donuts will be more tender. Likewise, the color results of banana tape are slightly yellowish white like tape in general. Banana tape into processed food, namely donuts, has a distinctive taste unlike donuts in general because this donut is more characterized by savory flavors and tape that feels a little sour in it but with a slightly sour taste it does not mempe. Donuts have a distinctive aroma so that the addition of tape produces donuts with an appetizing aroma because they contain the fragrant aroma of tape (Kamaruddin et al. 2017). Banana tape donuts have a wide potential and opportunity to improve and increase the nutritional value, benefits and quality of food because of that the donuts can be accepted and are in great demand among the public valued with preparations that contain many nutrients.



Picture 1. Banana Tape Donuts

Organoleptic Test of Banana Tape Donuts

Based on the organoleptic test conducted to determine whether banana tape donuts are acceptable to the public. Then the organoleptic test results are as follows:

Table 1. Organoleptic Test Results of Banana Tape Donuts

Variable	Very Like	Like	Average	Dislike	Very Dislike
Taste	19	10	1	-	-
Texsture	10	16	4	-	-
Aroma	12	15	3	-	-
Total	41	40	9	0	0
Total Score					90
Interpretation	Very Like				

The taste found in this banana tape donut with the criterion 'very like' has a percentage of 63.3% with the number of panelists who chose was 19 panelists (9 trained panelists, 5 lay panelists, and 5 moderately trained panelists). While in the third criterion, namely with the assessment of 'like' taste, it has a percentage of 33.3% which comes from the assessment of 10 panelists (3 trained panelists, 6 lay panelists, 1 moderately trained panelist). In the 'normal' criteria, it shows a percentage of 3.3% which comes from 1 moderately trained panelist. It can be concluded that the taste contained in banana tape donuts is highly preferred by the public because it has the highest percentage in the 'really like' criteria and the product can be positively accepted by the panelists. The taste of banana tape donuts is very soft and savory so the panelists liked it. Donuts that are in great demand by the public are donuts with a savory and slightly sweet taste (Koni et al., 2019)

In the texture parameter of banana tape donuts, the results of the organoleptic test showed that of the 30 panelists, the highest scale was the 'like' criterion with a total of 17 panelists (9 trained panelists, 3 moderately trained panelists, and 5 lay panelists) with a percentage value of 55.2%. In the 'really like' criteria, the number of panelists who chose was

9 panelists (2 trained panelists, 5 moderately trained panelists, and 2 lay panelists) with a percentage value of 31%, then 4 panelists (1 trained panelist, 3 moderately trained panelists) rated the texture of banana tape donuts on the 'normal' scale with a percentage value of 13.8%. Based on the results of the organoleptic test, it can be said that the texture of the banana tape donuts is quite good and acceptable to the panelists because it gets a 'like' scale rating from 17 panelists. The texture of banana tape donuts is soft because it is made from banana tape which contains a lot of water. According to (Hidayah et al., 2021) which suggests that the texture of banana tape donuts is influenced by the provision of yeast when making tape. In general, Indonesian people like soft-textured foods such as bread or donuts. Soft donuts are easy to enjoy and digest in the mouth (Angkat et al., 2022)

Based on Table 1, the organoleptic test results of the aroma of banana tape donuts showed that the panelists liked the aroma of banana tape donuts. Banana tape donuts were tested on 30 panelists with the details of the test results are; the percentage of the 'really like' criteria is 40% which comes from 12 panelists (8 trained panelists and 4 lay panelists) who really like the aroma of DOPESA. In the percentage of 'like' criteria, 50% came from 15 panelists (1 trained panelist, 6 moderately trained panelists). While 3 panelists felt the usual aroma of DOPESA with a percentage of 10%. The opinions of these 3 panelists stated that the aroma of DOPESA is not different from the aroma of donuts in general. The doughnuts we made have a distinctive banana aroma but lack the alcoholic or sour aroma of the fermented banana. This is likely due to the less long fermentation time of banana tape. In accordance with the statement expressed by that the longer fermentation time will produce a lot of alcohol or acidity (Fithriana et al., 2018). However, too long in the fermentation process will cause the product to be damaged, so the fermentation time must be according to the needs of the food product being processed (Muhammad, 2018). In contrast to the last 3 panelists, the opinions of 14 panelists and 13 panelists previously preferred the aroma of banana tape donuts that we made because it has a tape aroma that is not pungent. So it can be concluded that the panelists liked the aroma of DOPESA and could accept the aroma of DOPESA.

CONCLUSION

Banana tape donuts have a soft and tender texture, and have a distinctive aroma from the addition of banana tape. The taste of these donuts is different from donuts in general, characterized by savory flavors and tape that tastes slightly sour. Organoleptic test results conducted on 30 panelists showed 63.3% of panelists 'really liked' the taste of DOPESA, 50% of panelists 'liked' the aroma of DOPESA, and 53.3% of panelists 'liked' the texture of DOPESA. Thus, the banana tape donuts were well accepted by the panelists. Processing bananas into donut tape is expected to increase the economic value of bananas and increase food diversification in Indonesia.

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