Dragon Fruit Skin Tea with Added Salak Skin as Tanin and Pandan Leaves as Fragrance

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ARTICLE INFO

Keywords: Tea, Dragon Fruit Skin, Pandan Leaves, Snakeskin

Received : 3 March
Revised : 18 April
Accepted: 20 May

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ABSTRACT

Tea is a common drink that is often consumed by people because its taste soothes the body, but from this research, the researchers want to research tea which consists of dragon fruit skin as raw material which has antioxidant content, which is added with pandan leaves as a fragrance and salak skin as a tannin. of this tea, this research aims to see the level of liking of this tea. This tea has benefits that are quite helpful in health problems, one of which is preventing cancer. The results of this research show that color and taste do not show the real properties of dragon fruit skin and the results of organoleptic tests from the panelists show that texture is 85.71%, aroma is 94.74%, color is 66.67%, taste is 52.17%. From the data, it can be concluded that the highest level of liking was for the aroma at 94.74% because the panelists liked the aroma of the pandan leaves, and the lowest level was for the taste at 52.17% due to the lack of taste from the dragon fruit skin.
INTRODUCTION

In Indonesia, there are many types of drinks that Indonesian people usually drink, such as mineral water, coffee, fruit juice, and herbal drinks. Among other things, tea is a refreshing drink that is drunk to calm the body. Therefore, in this study, the researchers wanted to test whether the tea was made from dragon fruit skin by adding snake fruit skin as tannin and pandan leaves as a tea fragrance.

Tea is a caffeine-containing drink that belongs to the Camellia family, genus Camellia, and is a concoction made by soaking the dried leaves, leaf shoots, or leaf stalks of the Camellia sinensis plant in boiling water. Tea is made from plants that grow in the highlands. These tea plants are classified into four groups: black tea, oolong tea, green tea, and white tea. Tea is a natural source of caffeine which has been proven by (Rina Widhyani, 2021) theophylline and antioxidants, and has almost no fat, carbohydrate, and protein content. The slightly bitter taste of tea is delicious in itself. Flower tea mixed with jasmine buds, also called jasmine tea or jasmine-scented tea, is the most popular type of tea in Indonesia. Tea consumption in Indonesia is 0.8 kg per person per visit per year. However, Indonesia is still low in exporting tea from the data that has been obtained. Indonesia also often brews tea when visiting, but even though Indonesia is the fifth largest tea producer in the world, it is still far behind compared to other countries in the world. The term "tea" is also used for drinks made from herbs, spices, or infusions of other medicinal herbs such as rosehip, chamomile, chrysanthemum, and Jiaogulan tea.

Dragon fruit is a cactus fruit from the genera Hylocereus and Selenicereus. This fruit contains many nutrients and vitamins which are very beneficial for the body. The general nutritional content of this fruit consists of potassium, iron, fiber, calcium, and sodium, and dragon fruit can also produce quite high water content (Netty Maria Naibaho, 2019). Not only dragon fruit, the leaves, and skin also have benefits. Therefore, it is a shame that dragon fruit skin, with its properties, cannot be used as an additional ingredient in food and beauty products. In the world of food, dragon fruit skin can be used to make dodol jam, as a food coloring (Rahmawati, 2012) and to make food (Rochmawati, 2019). How to use it: crush the dragon fruit skin to extract the juice and mix it with food to add color. Among the various types of drinks that exist in society, not many people know that dragon fruit skin can also be used as a tea drink. Therefore, researchers wanted to know the level of panelists' preference for dragon fruit skin when made into tea.

Pandan leaves or Pandan Wangi are a type of monocotyledonous plant from the Polyaceae family which is characterized by its fragrant leaves. The leaves are an important part of traditional cuisine in Indonesia and other Southeast Asian countries. This plant is easy to find growing wild in shady parks and ditches. Aromatic pandan has a sweet aroma and is very unique because it contains the compound 2 AP (2 acetyl 1 pyrroline/ACPY) which is a derivative of the amino acid phenylalanine which is another component of pandan. Apart from that, it contains compounds such as alkaloids, flavonoids, saponins, tannins, polyphenols, and dyes. Fragrant pandan has many benefits, such as
helping prevent cholesterol, and reducing high blood pressure (Yunitasari, 2018), and can be used as a facial wash gel for acne which was done by (Lingling, 2023). Fragrant pandan is about 1 to 2 meters high and has branched stems and pointed leaves.

Salak fruit is a type of palm whose fruit is usually eaten. Salak is also called salak, and in English, it is called salak or salak because its skin resembles snake scales. Salak contains a lot of tannins which are usually found in tea. This tannin is a component of tea that helps bind and precipitate proteins. Salak fruit skin can be used as craft material such as brooches and key chains. Apart from that, salak fruit skin can be used to make drinks that improve health (Putri Puncak Anjani, 2015), treat diabetes, maintain pancreatic health, lower blood sugar levels, and much more.

LITERATURE REVIEW

Tea
Tea is a drink that comes from the Camellia sinensis plant and is a drink that is well-known among humans and is usually drunk every day. The drink comes from tea leaves which are usually picked in the highlands. Tea is popular with many people, including Indonesians. Even tea is also beneficial for health (Ali Ikhwan1, 2022)

Dragon Fruit Skin
Dragon fruit skin is the outer part of dragon fruit, which is a fruit that comes from several species of cactus in the genera Hylocereus and Selenicereus. Dragon fruit skin can be used as a natural dye because it has a nice pink color and is not easily damaged (Fitria, 2021). Dragon fruit skin is known to contain antioxidants, fiber, and other important nutrients. Due to the presence of ingredients that have health benefits, dragon fruit peel can prevent or cure several diseases, as it has been proven that dragon fruit peel can treat diabetes.

Pandan Leaves
Fragrant pandan (Pandanus amaryllifolius) is a plant with distinctive aromatic leaves. This aroma is caused by compounds such as 2-acetyl-1-pyrroline and linalool. Fragrant pandan leaves are used in traditional cooking to provide a fragrant aroma and have health potential that is being researched. Fragrant pandan cultivation needs to be carried out sustainably to protect the population and the environment (Desma Harmaidi*1, 2023). This plant has important value in Southeast Asian culture and cuisine as well as modern applications in food and drink.

Salak Skin
Salak skin, the outer part of the snake fruit, contains compounds such as polyphenols, flavonoids, and vitamin C which have antioxidant activity and anti-inflammatory potential. Salak skin also contains compounds with antimicrobial properties. This opens up opportunities for potential use in dietary supplements, skin care products, and food preservation. Snakeskin has a shape that tapers towards the top. Salak skin can also be used as a variety of creative tools.
METHODOLOGY

In this research, researchers used tools, namely, blenders, spoons, and containers, and the materials used in this research included dragon fruit skin, pandan leaves, snake fruit skin, sugar tea bags, and water. These ingredients are found in regional markets.

This research was conducted on Thursday, August 2023 in the laboratory area of the MTsN 1 Model Banda Aceh school by testing samples on 10 subjects for taste testing and then giving them a questionnaire to fill in the taste, color, texture, and aroma of the tea.

The dragon fruit skin is cut in half and then thinly sliced through a drying process at a temperature of 26˚ and 30˚ for a 5-day process. The drying process can affect the water content in a material (Delvi Adri, 2013), and is blended after going through the drying process. Salak skin also undergoes the same treatment as dragon fruit skin, namely being peeled until it is small and dried at temperatures of 26˚ and 30˚.

Analysis was carried out using quantitative methods. And gave the tea to the panelists for testing. This research data analysis focuses on answering the questionnaire that has been given and then calculating it using a formula.

RESULTS

This tea has several main ingredients, namely dragon fruit peel, pandan leaves as a fragrance, and snake fruit peel as the tannin of this tea, each of which has its benefits, dragon fruit peel is rich in polyphenols and is a source of antioxidants and pandan leaves which It is useful for treating tinea versicolor, reducing fever, preventing cancer and snake fruit skin which can be used as a diabetes medicine, because it can reduce sugar levels.

This tea was tested through color, aroma, texture, and taste tests which showed that the highest level of liking was for the texture and the lowest level of liking was for the taste.

a. Color

The color of this tea is the color that tea in general has, namely a dull yellow color. The color of this tea is liked by the panelists who have seen the color of this tea because of the nature of the color of the tea, but the researcher's hope for the color of this tea is purple. from the color of the dragon fruit skin that is added, because the color of the dragon fruit skin is strong enough to be produced due to the nature of the dragon fruit skin itself and its benefits in natural food coloring (Wahyuni, 2011)

Table 1. Color

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<tr>
<th>Answer</th>
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<th>Number of Answer Score</th>
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<td>28.57%</td>
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<td>S</td>
<td>7</td>
<td>2</td>
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b. Aroma

Regarding the aroma of pandan leaves added to the tea being tested, the panelists acknowledged that the aroma of this tea had a fragrant aroma and was comfortable to inhale. However, if the pandan leaves are dried, the aroma of the pandan leaves will be better than the previous aroma of pandan leaves which has been proven (Dewi Angraiyiati, 2017) because of this, some panelists think the aroma of pandan leaves is too excessive. The test results for the panelists can be seen in this table.

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<td>0%</td>
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<tr>
<td>S</td>
<td>9</td>
<td>2</td>
<td>94.74%</td>
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<td>TS</td>
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<td>1</td>
<td>5.26%</td>
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c. Texture

In testing the texture of the panelists, the texture of the tea was what the panelists were interested in because when they drank this tea, their throats felt more comfortable, according to them, this was probably due to the addition of pandan leaves.

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<tr>
<td>SS</td>
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d. Flavor

The taste of this tea did not meet the researchers' expectations because the taste of this tea was less integrated with the taste of dragon fruit skin, even though the composition of dragon fruit skin is more numerous than the ingredients this taste is more integrated with the taste of pandan leaves. However, the lack of taste can be covered because the texture of this tea is a favorite of the panelists due to the taste of pandan leaves

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<tr>
<td>S</td>
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<tr>
<td>TS</td>
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<td>1</td>
<td>4.33%</td>
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It can be seen above that the panelists' responses were quite positive, especially in the texture and aroma of the tea produced by the researchers.
DISCUSSION
The results of color of this tea a color that matches tea in general, although the color is a bit faded, the color of this tea does not show the color of the dragon fruit skin, and the aroma and texture of this tea have good results when consumed, the same as the results (Ali, 2016) and for taste, this tea has a more integrated taste in pandan leaves so that the taste of the dragon fruit skin is less pronounced, possibly due to the poor composition of the dragon fruit skin.

CONCLUSIONS AND RECOMMENDATIONS
Several tests on the skin of dragon fruit which are rarely used and contains antioxidant compounds then dried at a temperature of 25° and 30° and scented with pandan leaves which have a distinctive aroma and have benefits that are useful for health and increased immunity in the body and the tannins from snake fruit skin has The response was quite positive in terms of aroma and texture, although in terms of taste, it was still not satisfactory for the testers of this tea, the impression of the tea, in general, was still felt by the slightly bitter taste produced by the tannins from the added snake fruit bark.

FURTHER STUDY
This research requires further research on the levels needed to have the appropriate taste and color and further research on the drying process and composition of each ingredient in this tea to obtain satisfactory results for the composition of consumers.

ACKNOWLEDGMENT
Together, let's give thanks to Allah Almighty because of His blessings and grace. This research can be completed. The researchers also thank our parents who supported us, Mrs. Nurmahni Harahap M. Pd, and the research supervisors. We would also like to thank the Panelists who have helped with this research and all our comrades in arms who have provided support to the researcher so that the researcher can complete this article.

REFERENCES


