

Making Buroncong with Black Glutinous Rice Flour

Abstract

This research was conducted in the practical laboratory of the Culinary Arts department at Makassar Tourism Polytechnic. The definitive attributes of the buroncong considered ideal and appropriate for extensive testing on informants were obtained from the results of the sixth experiment, which were informed by the findings of experiments one through six. The characteristics of buroncong from this current trial, in terms of flavor and texture, adhered to the standards set by researchers. The final results of the sixth experiment will provide a basis for assessing the sensory characteristics of informants.

This study examines the use of black glutinous rice flour in buroncong cake production and its effects on taste, texture, color, and aroma. Conducted in the Culinary Arts laboratory at Makassar Tourism Polytechnic, the research employed a pre-experimental design with 20 informants. Data were collected through interviews and sensory descriptive evaluation, followed by thematic analysis to identify key sensory attributes. Results from six trials indicated that the final product met the desired sensory standards, suggesting that black glutinous rice flour is a viable alternative ingredient for buroncong. These findings contribute to the development of traditional food products using alternative ingredients.

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Introduction

Amid the rise of modern culinary dishes, Indonesia's traditional culinary treasures, such as buroncong, deserve to be preserved.

Buroncong is a traditional cake from South Sulawesi that is still popular in the community.

The taste combines sweet, savory, and salty with a chewy texture. This cake has high

cultural value and is known as “guroncong” in Makassar and “buroncong” in Bone. It resembles pukis or pancongs and has been known to the public for decades (Rauf et al., 2019).

Buroncong is generally made with wheat flour, coconut milk, and grated coconut. However, since wheat flour must be imported, it is necessary to find local substitutes that can be used. Therefore, innovation in making buroncong is needed to increase the diversity and utilization of local ingredients (Saepudin et al., 2017).

Black glutinous rice (*Oryza sativa* var. *glutinosa*) is an alternative ingredient. Black glutinous rice flour has better pigment content than other flours. The black color comes from the bran layer containing anthocyanin pigments, providing a distinctive color and health benefits. Black glutinous rice bran is rich in cereal fiber, which is good for digestive health (Kurnia et al., 2019). In addition, black glutinous rice has the potential to be a source of antioxidants, bioactive compounds, and fiber that are important for health (Yanuar, 2009).

The use of black glutinous rice as the main ingredient in making buroncong will increase the nutritional value of this traditional cake and provide additional economic value for local farmers. By replacing wheat flour with black glutinous rice flour, dependence on imported ingredients can be reduced, supporting local agriculture and encouraging food sustainability in Indonesia. Through this innovation, we preserve traditional cakes and promote a healthy and sustainable lifestyle.

Processing buroncong with black glutinous rice flour is expected to open new opportunities for the local food industry and improve the community's welfare. This short study explores the potential of using black glutinous rice flour as a superior local raw material, considering the color, aroma, taste, and higher nutritional value produced.

Methodology

This research utilized a pre-experimental method in which a single group of subjects was treated without using a control group. In other words, all participants received the same intervention, with no comparison group to measure the impact of the intervention. This method was chosen because it allows experimentation with new concepts through characteristic trials, aiming to achieve optimal final results. Specifically, this study focused on determining the most suitable recipe for buroncong made with black glutinous rice flour and identifying its characteristics, such as taste, color, aroma, and texture.

Additionally, the research adopted a qualitative approach to gain an in-depth understanding of specific perceptions and phenomena through collecting and analyzing descriptive data. Data was gathered through in-depth interviews, observations, and document analysis, resulting in verbal expressions that describe the research object. The process involved careful planning, direct data collection from subjects, thematic analysis, and presenting results in a narrative form. As qualitative research requires comprehensive insights and practical communication skills, the researcher must thoroughly understand the context and meaning of the collected data (Syahir, 2021).

This qualitative approach was deemed most suitable for studying the production of buroncong using black glutinous rice flour, as it allows for a comprehensive exploration of participants' experiences and perceptions of the cake. By employing this method, researchers can collect detailed descriptive data through direct interviews, enabling them to understand the nuances and variations in responses. Additionally, this approach allows for the adaptation of findings to real-world contexts, providing a more holistic understanding of how buroncong, made from black glutinous rice flour, is perceived and valued by consumers.

Direct interviews further facilitated the exploration of informants' preferences, impressions, and opinions, aspects that are not easily captured through quantitative methods. Therefore, a qualitative approach was considered the most appropriate for this study, as it captures a more comprehensive and nuanced picture of consumer experiences.

Research data were classified into two main categories: primary and secondary data. The data collection techniques included:

1. Documentation

This method involved collecting data and information from various written sources, such as books, archives, documents, reports, figures, and images. Using documentation, researchers could gather structured information to provide the necessary context and background for the study (Maulidah, 2020).

2. Interviews

Interviews served as a critical data collection method, involving direct interactions between the interviewer and the informants to obtain relevant information. The semi-structured interviews consisted of open-ended questions focusing on the characteristics of the research product, including texture, color, taste, and aroma (Priadana & Sunarsi, 2021). Several aspects were considered during the interview process:

a. Selecting Informants

Informants included culinary experts who had an understanding of the field, as well as regular consumers of buroncong.

b. Formulating Interview Questions

Semi-structured interviews were conducted using open-ended questions about the product's characteristics, such as texture, color, taste, and aroma.

c. Conducting Interview Sessions

During the interviews, voice recordings and notes were taken to document the responses provided by the informants.

d. Analyzing Interview Results

After the interview sessions, researchers reviewed the notes and recordings to understand better the informants' statements regarding Buroncong's characteristics.

The research utilized sensory descriptive evaluation to analyze the product's features, such as taste, color, aroma, and texture, through the senses of the panelists (Sirangelo, 2019). This technique provided a detailed assessment of each sensory aspect, offering a comprehensive picture of the product's characteristics. Furthermore, thematic analysis was employed to identify patterns or themes within the collected data (Braun & Clarke, 2006 in Rozali, 2022). This method is highly effective for research requiring in-depth analysis, as it helps identify significant themes emerging from the data.

Results

The academic advisor suggested utilizing a conventional recipe from a local buroncong vendor, given that the product under examination is a traditional cuisine. The formula was acquired from the vendor, but the precise proportions of ingredients were withheld for confidentiality reasons. The recipe was refined through interaction with an expert, a lecturer in the Culinary Arts Program at Makassar Tourism Polytechnic. Modifications were implemented to the original recipe based on these discussions. Consequently, the recipe specified in Table 1 is a modified iteration of the vendor's usual recipe.

Recognition Stage

In this study, researchers observed differences in the characteristics between traditional buroncong and buroncong made with black glutinous rice flour. These differences were primarily due to substituting the main ingredient, wheat flour, with black glutinous rice flour, which significantly affected the final texture, taste, color, and aroma of the buroncong.

Development and Definition Stage

Reference Recipe			Modified Recipe	
No.	Ingredients	Measurements	Measurements	Ingredients
1.	Wheat Flour	250 g	250 g	Black Glutinous Rice Flour
2.	Sugar	75 g	100 g	Sugar
3.	Coconut Milk	200 ml	200 ml	Coconut Milk
4.	Grated Coconut	150 g	100 g	Grated
5.	Egg	1 pcs	2 pcs	Egg
6.	Water	200 ml	200 ml	Water
7.	Salt	5 g	5 g	Garam
8.	Margarine	20 g	5 g	Baking Powder
9.			20 g	Margarine

Table 1: Buroncong Recipe (Source: Research data)

This study addresses two principal problem formulations: First, what steps are involved in producing buroncong using black glutinous rice flour? Second, what is the effect of utilizing black glutinous rice flour as a substitute ingredient on the characteristics of buroncong, including flavor, texture, color, and aroma? The study involved six experimental trials, each revealing variations in these characteristics, especially in texture, detailed in the following sections.

The food product development process consists of several stages. However, the author focused on the fourth key stage in this research. These stages, which are crucial to the development of the buroncong recipe, are outlined as follows:

1. Material Selection

The selection of ingredients for making buroncong cake involves choosing high-quality ingredients to ensure the final product meets the desired standards. This step is crucial, as the quality of the ingredients directly impacts the product's outcome.

2. Weighing Materials

Weighing the ingredients is necessary to measure the exact quantities needed for the recipe. A digital scale ensures accuracy, allowing the ingredients to match the specified measurements in the recipe.



Figure 1. Tools and Equipment (Source: Research Data)



Figure 2. Ingredients for Making Buroncong (Source: Research Data)

3. Mixing Ingredients

The mixing process involves combining the dry and wet ingredients into a homogeneous dough using a balloon whisk. This method ensures that the ingredients are evenly incorporated, resulting in a consistent texture in the final product.



Figure 3. Mixing Ingredients (Source: Research Data)

4. Dough Molding and Cooking in a Buroncong Mold

Molding the dough involves placing it into a preheated, margarine-greased mold to prevent sticking during the cooking process. The buroncong is then cooked in the mold on the stove over low heat. Once the mixture is poured into the mold, it is covered to ensure even cooking. The dough is fully cooked when the top solidifies and changes color, while the bottom becomes golden brown. The buroncong is then carefully removed from the mold using a skewer.



Figure 4. Dough Molding and Cooking in a Mold (Source: Research Data)

Six experiments were conducted in this research, each differing significantly in terms of the materials used, their quantities, and the experimental procedures applied. The variations included:

1. Experiment I: Modifying the ingredients from the standard buroncong recipe

No.	Ingredients	Quantity	Unit
1.	Black Glutinous Rice Flour	250	g
2.	Sugar	75	g
3.	Grated Coconut	150	g
4.	Chicken Egg	1	pcs
5.	Coconut Milk	100	ml
6.	Water	100	ml
7.	Salt	5	g
8.	Margarine	50	g

Table 2: Buroncong Recipe from Experiment I (Source: Research data)

In the initial trial, researchers utilized a recipe sourced from a buroncong vendor and substituted wheat flour with black sticky rice flour to change it without incorporating other ingredients. The dry ingredients are combined, followed by the liquid elements, amalgamate all components. The dough exhibits a liquid consistency, a purplish hue attributed to black glutinous rice flour, and a notable scent.

The conclusive outcomes from the initial trial revealed that the buroncong cake possesses a solid and relatively firm texture, distinguishing it from the typical buroncong cake, as it is composed of black sticky rice, which is heavy in starch and devoid of gluten. Additionally, the cake's texture is chewy, whereas the exterior of the buroncong cake is somewhat firm. The cake exhibits a dark purple-black hue, attributed to black glutinous rice flour. The cake possesses a unique, aromatic flavor derived from black sticky rice, complemented by a sweet and savory profile from coconut milk and grated coconut.

2. Experiment II: Use of Starter

The second attempt differed from the first since specialists advised incorporating a starter into the buroncong dough. The starter comprised black glutinous rice flour, high-protein wheat flour, water, and yeast. They were incorporated to facilitate the dough's natural development and impart distinctive qualities to the buroncong cake.

The final product utilizing the starting displayed a multifaceted sour flavor, attributable to the synthesis of lactic and acetic acids by the bacteria in the starter, which amalgamated with the taste of the black glutinous rice. The buroncong with the starter exhibited a rich purple coloration, a unique aroma of rice flour intertwined with a faint sourness from fermentation, and a dense texture that lacked the chewiness characteristic of typical buroncong cakes.

No.	Ingredients	Quantity	Unit
1.	Black Glutinous Rice Flour	200	g
2.	Sugar	75	g
3.	Grated Coconut	150	g
4.	Egg	1	pcs
5.	Coconut Milk	100	ml
6.	Water	50	ml
7.	Salt	5	g
8.	Margarine	50	g
9.	Starter	100	g

Table 3: Buroncong Recipe from Experiment II (Source: Research data)

3. Experiment III: Use of Xanthan Gum, Emulplex, Egg Replacer, and Gelatin

In the third experiment, researchers utilized 5 grams of xanthan gum, 0.6% emulplex (relative to the flour weight), egg replacer, and gelatin, according to the identical recipe formula in the first experiment. The objective of including these four ingredients was to alter the texture of the buroncong crafted from black glutinous rice flour to more nearly mimics traditional buroncong, albeit not completely.

The experiment's final results demonstrated that the buroncong possessed a delicate, supple, and fluffy texture, which persisted even after cooling for many minutes. Nonetheless, the flavor varied from prior experiments, eliciting a slick sensation in the oral cavity. This result was ascribed to the overutilization of xanthan gum. Excessive use of xanthan gum may lead to excessively thick and slick dough, producing an unpleasant mouthfeel. The high concentration of xanthan gum, which can create a thick and viscous solution, was responsible for this impression. Consequently, additional experimentation is required to decrease the xanthan gum concentration in the buroncong dough to attain an ideal outcome.

No	Ingredients	Quantity	Unit
1.	Black Glutinous Rice Flour	250	g
2.	Sugar	60	g
3.	Dried Grated Coconut	35	g
4.	Egg	1	pcs
5.	Coconut Milk	125	ml
6.	Water	125	ml
7.	Salt	5	g
8.	Margarine	50	g
9.	Egg Replacer	1	pinch
10.	Gelatine	1	pinch
11.	Emulplex	1,5	g
12.	Xanthan Gum	5	g

Table 4: Buroncong Recipe from Experiment III (Source: Research data)

4. Experiment IV: Adjustment of Xanthan Gum Amount

In the fourth trial, researchers optimized the prior formulation by reducing the amount of xanthan gum in the dough and using yeast to facilitate the leavening process. The water content was raised to 250 milliliters, and the coconut milk was modified to 250 milliliters. The modifications sought to avert the buroncong dough from becoming excessively dense due to xanthan gum and other supplementary components.

No	Ingredients	Quantity	Unit
1.	Black Glutinous Rice Flour	250	g
2.	Sugar	60	g
3.	Dried Grated Coconut	35	g
4.	Egg	1	pcs
5.	Coconut Milk	125	ml
6.	Water	125	ml
7.	Salt	5	g
8.	Margarine	50	g
9.	Egg Replacer	1	pinch
10.	Gelatin	1	pinch
11.	Emulplex	1,5	g
12.	Xanthan Gum	2,5	g
13.	Yeast	1	pinch

Table 5: Buroncong Recipe from Experiment IV (Source: Research data)

5. Experiment V: Use of Baking Powder

After the fourth experiment, the researchers evaluated the buroncong recipe. In terms of taste, aroma, and texture, the results met expectations. However, issues arose with using uncommon or not widely known ingredients, such as xanthan gum, emulplex, egg replacer, and gelatin. Additionally, the researchers noted that these ingredients are relatively expensive and difficult to find in the market. To address these concerns, they consulted with culinary arts experts and lecturers. Based on the consultation, modifying the recipe by seeking alternative ingredients that could help achieve a light and non-tough texture was recommended. Furthermore, reducing the grated coconut content from 100 grams to 50 grams was advised, as grated coconut absorbs moisture from the dough, leading to a dense and complex texture during the cooking process. Moreover, the cooked buroncong exhibited an overpowering coconut oil aftertaste, which was considered undesirable.

In the fifth experiment, the researchers used the same recipe as the previous experiment but added 10 grams of baking powder. The baking powder was added to help the buroncong dough rise, giving it a light and soft texture. When baking powder reacts with liquid and heat, carbon dioxide gas is produced, creating tiny bubbles that cause the dough to expand and become lighter. The preparation, weighing, and roasting processes were conducted similarly to the previous experiment.

However, the final result of this experiment showed that the buroncong cake had an excessively fluffy texture, resembling that of a sponge cake, and crumbled quickly. This outcome was attributed to the excessive use of baking powder. Therefore, reducing the amount from 10 grams to 5 grams was deemed necessary. In terms of color, aroma, and taste, the results were consistent with those of the previous experiments. Consequently, further experimentation is needed to adjust the baking powder content to achieve the desired texture without making the buroncong overly fluffy.

No	Ingredients	Quantity	Unit
1.	Black Glutinous Rice Flour	250	g
2.	Sugar	60	g
3.	Dried Grated Coconut	50	g
4.	Egg	1	pcs
5.	Coconut Milk	100	ml
6.	Water	100	ml
7.	Salt	5	g
8.	Margarine	10	g
9.	Baking Powder	10	g

Table 6: Buroncong Recipe from Experiment V (Source: Research data)

6. Experiment VI: Adjustment of Baking Powder Amount

No	Ingredients	Quantity	Unit
1.	Black Glutinous Rice Flour	250	g
2.	Sugar	60	g
3.	Dried Grated Coconut	50	g
4.	Egg	1	pcs
5.	Coconut Milk	100	ml
6.	Water	100	ml
7.	Salt	5	g
8.	Margarine	10	g
9.	Baking Powder	5	g

Table 7: Buroncong Recipe from Experiment VI (Source: Research data)

In the sixth experiment, the recipe from the fifth experiment was refined by reducing the baking powder content from 10 grams to 5 grams per batch. The manufacturing process, from preparing the ingredients to baking the buroncong dough, was conducted in the same manner as in the previous experiment. The dry ingredients were prepared first, then mixed with the wet ingredients until a homogeneous dough was achieved.

The final results of the buroncong using 5 grams of baking powder showed a texture similar to the fourth experiment, which included additional ingredients such as emulplex, xanthan gum, egg replacer, yeast, and gelatin. The buroncong cake had a soft texture without being overly complicated, unlike previous experiments that used excessive baking powder. Consequently, the results of this sixth experiment were deemed suitable for sensory evaluation by the informants.

Delivery Phase (Deliver)

The second research question explores the impact of using black glutinous rice flour as an alternative ingredient in buroncong on its qualities, including flavor, texture, color, and aroma, and assessing these sensory attributes involved collecting data through interviews with two groups of informants: limited and trained. These interviews aimed to gather comprehensive information relevant to the research themes and to validate findings obtained through other methods (Rahardjo, 2011). The

results of these interviews might align with or differ from previously collected information, serving as part of the verification process.

Based on the outcomes of the first to sixth trials, the final characteristics of buroncong deemed optimal for evaluation by informants were derived from the sixth experiment. Although the fourth experiment also produced feasible results for testing, the materials used were less efficient due to their limited availability in the market, high cost, and unfamiliarity to the general public. Therefore, the sixth trial was considered more suitable for informant testing. The characteristics of the buroncong from this experiment, both in taste and texture, met the standards set by the researchers. Consequently, the final product from the sixth experiment served as the basis for the sensory evaluation conducted with the informants.

Following the interviews with both limited and trained informants regarding the attributes of buroncong made with black glutinous rice flour, researchers identified several points of consensus and divergence. These findings were then summarized and classified into two primary categories for further analysis.

1. Limited Informants

The characteristics of buroncong made with black glutinous rice flour were evaluated by limited informants, including buroncong vendors, culinary arts lecturers, and traditional cake vendors. These informants, both male and female adults familiar with consuming buroncong, provided their insights on four main aspects: texture, taste, aroma, and color.

a. Texture

Buroncong, made from black glutinous rice flour, exhibited a soft, moist texture, distinct from the traditional variety. This texture is attributed to the high amylopectin content in black glutinous rice, which absorbs water and fat well during baking. Amylopectin's branched structure acts as a water-binding agent, retaining moisture even after cooling (Haug & Lantzsch, 1983). Additionally, the chewiness of the buroncong, which resembles the texture of meatballs but is not overly soft, is due to the cohesive nature of amylopectin (Lin et al., 2000). The cake's density and physical structure are further enhanced by roasting with margarine, adding a slight oily sheen to the surface (Juliano, 1985). The transformation of black sticky rice into flour results in a unique product that provides a softer, moister texture compared to traditional buroncong.

b. Taste

The taste of buroncong made with black glutinous rice flour is distinctive and immediately noticeable, offering a unique eating experience. It balances the sweet, savory, and slightly nutty flavors characteristic of black sticky rice (Chang, 2003). Combining black glutinous rice, grated coconut, and coconut milk

enhances this natural sweetness and adds depth to the flavor profile (Morita et al., 2003). Some informants also detected a caramel aftertaste resulting from the interaction of sugar and coconut exposed to heat during baking (Loth et al., 2005). This complex flavor combination highlights the uniqueness of black glutinous rice, distinguishing it as more than just a variation of traditional buroncong.

c. Aroma

The aroma of buroncong, made from black glutinous rice flour, reflects the nutty and earthy scent of the rice itself (Juliano, 1985). This fragrance and the pungent aroma of grated coconut and coconut milk create an appetizing combination (Schieberle & Grosch, 1999). Adding margarine during baking introduces a subtle note that enriches the aroma (Lawrence & Schieberle, 2000). This complex aromatic profile captures the essence of black glutinous rice and the complementary ingredients, making the buroncong more inviting and unique.

d. Color

The color of the buroncong cake represents the natural blackish-purple shade of black glutinous rice, which contains anthocyanin pigments responsible for its dark hue (Sapers et al., 1999). The baking process results in a purplish-brown exterior due to pigment transformation, the Maillard reaction, and sugar caramelization (Morrison & Tester, 1997). Inside, the cake retains a deep purple color interspersed with the whiteness of grated coconut, showcasing the resilience of anthocyanin pigments during cooking (McDougall et al., 2008). The distinct color of the buroncong provides a visually appealing and characteristic appearance.

2. Trained Informants

The characteristics of buroncong made from black glutinous rice flour were also evaluated by trained informants, namely culinary arts students familiar with consuming traditional buroncong. Their views were categorized into four aspects: texture, taste, aroma, and color.

a. Texture

Buroncong, made with black glutinous rice flour, exhibited a unique texture distinct from traditional buroncong. It was described as soft and moist, with a slightly chewy sensation when eaten. This characteristic stems from the high amylopectin content in black glutinous rice, which absorbs water and swells during cooking, contributing to the cake's softness and chewiness (Juliano, 1985; Morrison & Tester, 1997). The cake also showed a dense texture and did not crumble easily when held, though a slight oily sensation from the margarine was noted. Some informants mentioned a scattered texture similar to marble cake, likely due to variations in starch distribution or ingredient interactions during preparation. Despite these variations, the balance between softness and chewiness provided an innovative eating experience different from traditional buroncong

b. Taste

The flavor of the buroncong reflected the original characteristics of black sticky rice, offering a dominant soft, sweet, and savory taste. The natural sweetness of the black sticky rice, combined with the savory notes from coconut milk and grated coconut, created a distinctive and harmonious flavor (Shih et al., 2000). A slightly salty aftertaste from the margarine used during baking added depth to the flavor profile (Morrison & Tester, 1997). Several informants noted that this balance of savory, sweet, and salty flavors made the buroncong appealing and stimulating to the appetite, aligning with the theory that balanced flavors create a satisfying eating experience (Desmond & Taylor, 2005). However, some informants found the salty taste of margarine slightly overpowering, indicating that the variety of added ingredients could influence the balance of flavors (Dyer & Scaife, 2003). The buroncong offered a complex and attractive taste experience, providing an innovative alternative to traditional variations.

c. Aroma

The aroma of the buroncong reflected the natural fragrance of black glutinous rice, characterized by its nutty and earthy scent (Juliano, 1985). This distinctive aroma, combined with the strong scents of grated coconut and coconut milk, created an appetizing mixture (Schieberle & Grosch, 1999). The margarine added during baking introduced a subtle note that complemented the overall aromatic profile (Lawrence & Schieberle, 2000). Together, these elements resulted in a complex aroma that captured the essence of black glutinous rice, further enhancing the unique sensory experience of this buroncong variation.

d. Color

The color of buroncong, made with black glutinous rice flour, presented visually striking characteristics. The deep purple color was attributed to anthocyanin pigments in black sticky rice (Luo et al., 2009). During baking, the Maillard reaction contributed to a purplish-brown exterior, while the mixture of ingredients, such as grated coconut, created a unique color gradient with a darker top and a lighter interior (Hodge, 1953; Zhang et al., 2006). Trained informants described the color as a dark or deep purple, closely resembling the original hue of black sticky rice. After baking, the intensity of the color became more pronounced, adding to the buroncong's distinctive and appealing visual appearance.

Discussion

Based on the experiments conducted to produce buroncong using black glutinous rice flour, six trials were carried out, each with distinct characteristics and variations in ingredients, methods, and outcomes. The key differences and similarities observed across the six experiments are summarized as follows:

a. First Experiment

The buroncong produced in the first experiment had a very dense and complex texture, unlike traditional buroncong. Its flavor and aroma showcased the taste of black glutinous rice combined with the savory and sweet notes of coconut milk, grated coconut, and sugar. The aroma was distinctly fragrant, characteristic of black glutinous rice, while the color was a dark purple-black.

b. Second Experiment

In the second experiment, a starter was introduced, resulting in a buroncong with a complex, sour taste and aroma reminiscent of fermented sticky rice ("tape"). The texture was dense but not as hard as in the first experiment. The sour flavor was influenced by the bacteria in the starter combined with the black glutinous rice flour.

c. Third Experiment

In the third experiment, emulplex, xanthan gum, egg replacer, gelatin, and yeast were added to the recipe. This resulted in a buroncong with a soft, tender, and fluffy texture that remained stable even after cooling. However, the excessive use of xanthan gum also produced a slippery sensation on the tongue.

d. Fourth Experiment

In the fourth experiment, the amount of xanthan gum was adjusted, eliminating the slippery mouthfeel. The resulting buroncong had a soft texture, a blackish-purple color, and a fragrant aroma from the black glutinous rice, coconut milk, and grated coconut.

e. Fifth Experiment

The buroncong in the fifth experiment exhibited a fluffy and crumbly texture, similar to sponge cake, due to the addition of an excessive amount of baking powder. Adjusting the baking powder content from 10 grams to 5 grams was identified as necessary. Despite the texture issue, the taste, aroma, and color were similar to the fourth experiment's.

f. Sixth Experiment

The sixth experiment, considered the ideal trial, involved adjusting the baking powder content to 5 grams. The resulting buroncong had a blackish-purple top, a brownish exterior from the baking process, and a soft, slightly chewy texture. The aroma blended black glutinous rice and coconut milk with a sweet, savory taste unique to black sticky rice. The outcome met the researchers' expectations and was suitable for sensory evaluation by informants.

Conclusion

This study successfully identified the optimal process for making buroncong using black glutinous rice flour through a series of six experiments. The sixth experiment emerged as the most successful, where reducing the baking powder to 5 grams resulted in a soft, non-crumbly buroncong with the desired texture, taste, and aroma. Notably, additional ingredients like emulplex, xanthan gum, egg replacer, yeast, and gelatin were deemed unnecessary, simplifying the recipe and making it more economical and practical for production.

The final product from the sixth experiment demonstrated that using black glutinous rice flour can provide significant added value. The buroncong had a distinct flavor and aroma, with a visually appealing blackish-purple color that reflected the characteristics of black glutinous rice. Furthermore, the harmonious blend of black glutinous rice and coconut milk created a captivating sensory experience. This buroncong has the potential to serve as an innovative alternative in the variety of Indonesian sweets.

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