



## **Hedonic Evaluation of Randang Quality from Two Restaurants in Padang City**

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**ABSTRACT** - Randang is a traditional Minangkabau dish that is popular for its distinctive flavour which is produced by a long cooking process using strong spices and herbs. This popularity has made it a must-have dish in various restaurants. Each restaurant serves Randang with different characteristics, thus influencing variations in consumer preferences. This study aims to analyze differences in the level of preference of culinary arts students for Randang from two restaurants in Padang City, namely Rajo-rajo and Selamat. The study used a quantitative method with a comparative approach. A total of 50 culinary arts students served as panelists in a hedonic test using a scale of 1-7. Data were analyzed using a Paired Sample t-Test with SPSS 26. The results showed significant differences in daging color ( $P=0.004$ ), meat texture ( $P=0.000$ ), and the daging taste ( $P=0.011$ ). Overall, panelists preferred Randang from Rajo-rajo restaurant over Selamat restaurant. Sensory characteristics were proven to influence the level of student preference for Randang. These findings provide understanding for culinary entrepreneurs about consumer preferences for Randang and serve as a basis for developing culinary products based on cultural heritage.

**Keywords:** Randang, hedonic test, level of preference.

### **INTRODUCTION**

West Sumatra is widely known for its traditional cuisine, rich in cultural and philosophical values. Traditional food refers to dishes and beverages that have been passed down from generation to generation, developing specifically in certain regions (Harsana et al., 2023). One popular traditional dish from West Sumatra is Randang. Randang, or maRandang, refers to a dish made from beef cooked long and slowly with various spices and coconut milk until it reaches a dry texture (Agusrianti & Gusnita, 2021). In Minangkabau culture Randang is also known as induak jamba and plays an important role in various traditional ceremonies such as weddings (baralek), circumcisions, batagak panghulu, turun mandi, and religious festivals (Tanjung et al., 2020). Furthermore, Randang has gained international recognition since it was named the world's most delicious food by CNN on April 7, 2011 (Amalia, 2019).

Extensive research has been conducted on Randang, covering recipes, ingredients, and standardization processes. Most previous studies have focused solely on standardizing Randang recipes, distinguishing between regional varieties (such as Darek and Pasisia), and on processing and quality aspects. However, research on preferences for ready-to-eat Randang products remains limited. Understanding consumer preferences for a product is crucial for developing the Minangkabau culinary business. Therefore, this gap is the primary basis for conducting this research.

Randang is generally made with tenderloin beef and coconut milk from a medium-sized ripe coconut (Ariyeniwinsah & Elida, 2021). Additionally, the spices and herbs used include red chilies, shallots, garlic, ginger, galangal, lime leaves, bay leaves, turmeric leaves, coriander, nutmeg, lemongrass, and salt (Adlim et al., 2024). These spices are ground and cooked with coconut milk to create the distinctive flavor of Randang. The long cooking process causes the Randang to gradually darken in color (Yuliana et al., 2023). In general, high-quality Randang is

characterized by neat cuts, a dark brown color produced by long cooking with coconut milk and spices, a distinctive aroma, a soft and dry texture, and a savory flavor (Kartika & Gusnita, 2023).

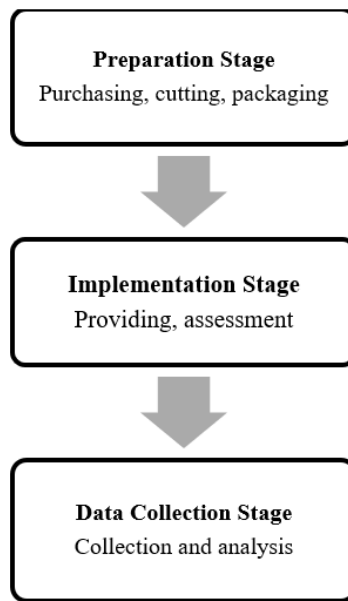
Randang is very popular in various restaurants in West Sumatra, especially in Padang City. Many restaurants serve Randang with unique characteristics influenced by the choice of ingredients, cooking techniques, and cooking time. A restaurant is a place of business for customers to buy and enjoy food and drinks that have been served with the provided service (Dwi Pratiwi et al., 2024). In Padang City, there are two restaurants famous for their Randang: Rajo-Rajo Restaurant and Selamat Restaurant. Randang at Rajo-Rajo Restaurant is characterized by a brownish color, tender and dense meat texture, dry and rough dadak texture, and a savory and slightly sweet taste. On the other hand, Randang at Selamat Restaurant is characterized by a blackish color, soft and tender meat texture, moist and smooth dadak texture, and a savory and slightly spicy taste.

Understanding how consumers assess sensory differences between products is crucial, especially in the context of developing the traditional culinary industry. Therefore, this study, entitled “Hedonic Evaluation of Randang Quality from Two Restaurants in Padang City,” was conducted to assess consumers’ preference for Randang, focusing on culinary arts students. These students were selected as panelists because they possess a basic knowledge of traditional Minangkabau cuisine particularly Randang, which makes them more sensitive in evaluating sensory aspects such as color, aroma, texture, and taste. The purpose of this study was to analyze differences in culinary arts students’ preference for Randang from Rajo-rajo and Selamat restaurants based on the sensory attributes of color, aroma, texture, and taste. The results of this study are expected to provide relevance and contribute to the development of traditional Minangkabau culinary products that suit the tastes of modern consumers without diminishing their cultural values.

## METHOD

The study used a quantitative method with a comparative approach, comparing Randang from two different restaurants. The objects of the study were Randang from the Rajo-rajo restaurant and Randang from the Selamat restaurant. The panelists in this study were untrained panelists who were Culinary Arts students of the PKK Study Program, Faculty of Tourism and Hospitality, Padang State University. The selected panelists were an unlimited number of 50 people taken from Culinary Arts students of the 2021, 2022 and 2023 intakes with an age range of 19-24 years male and female who had taken the Minangkabau Traditional Food course. These students were selected because they had basic knowledge of the sensory characteristics of Randang but were not professionally trained, so they could provide a natural and appropriate sensory evaluation to the level of consumer preference. This research was conducted at the Culinary Arts Workshop, Faculty of Tourism and Hospitality, Padang State University, from July 25-August 25, 2025.

The research procedure consisted of three stages. First, stage involved the preparation phase which involved purchasing Randang from both restaurants simultaneously to maintain freshness, cutting it into small pieces, and packaging it in randomly coded containers. Second, the implementation stage was carried out by giving samples to the panelists, explaining the procedure for filling out the questionnaire, and asking them to evaluate the sensory attributes of color, aroma, texture, and taste using a hedonic scale of 1–7. Third, data collection stage involved collecting the completed questionnaires from the panelists for further analysis.



**FIGURE 1.** Flowchart of the research stages of the hedonic test of Randang.

The research tool used was a hedonic test questionnaire with a scale of 1–7 (1 = very dislike, 7 = very like). The hedonic test is a sensory analysis method used to determine the level of liking for a product based on its quality (Wulandari, 2023). This test covers four sensory attributes: color, aroma, texture, and taste. The principle of the hedonic test is that panelists provide personal responses regarding their level of liking for the product being evaluated by indicating their level of liking on a hedonic scale provided in the questionnaire.

**TABLE 1.** Research instruments.

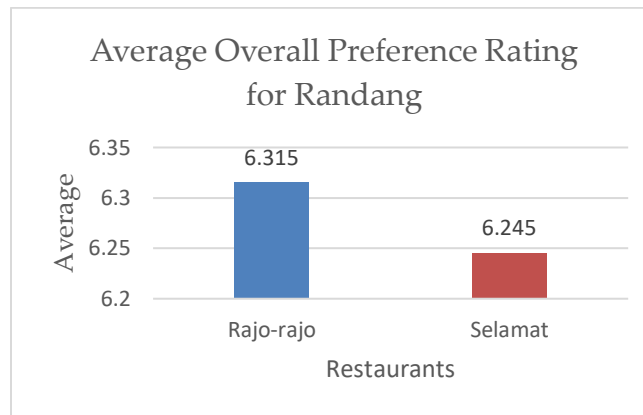
Variables	Indicator	Rating Scale
Color	a. Randang meat	Hedonic scale: 7=Very like
	b. Randang dadak	
Aroma	a. Randang meat	6=Like
	b. Randang dadak	5=Somewhat like
Texture	a. Randang meat	4=Neutral
	b. Randang dadak	3=Somewhat dislike
Taste	a. Randang meat	2=Dislike
	b. Randang dadak	1=Very dislike

In this study, the data analysis technique used was descriptive statistics to calculate the average value of panelists' preferences on sensory attributes. Furthermore, a paired sample t-test was conducted using SPSS version 26 software to identify significant differences in students' level of preference for Randang from two restaurants. Data obtained from the hedonic test were analyzed based on the hedonic scale and then further tested using the T-test. The T-test was conducted to compare the calculated t-value with the t-table value.

## RESULTS AND DISCUSSION

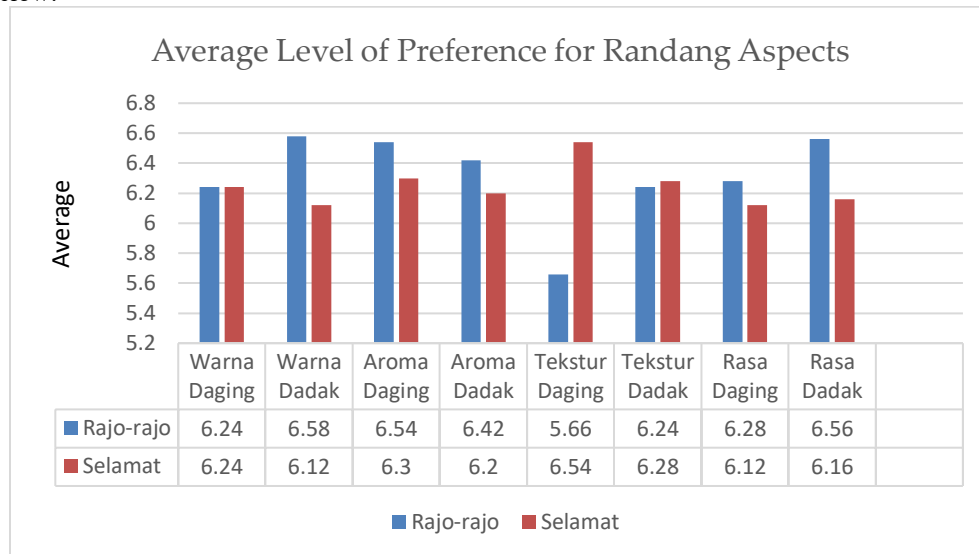
### Preference Levels of Randang from Rajo-rajo Restaurant and Selamat Restaurant

This research aimed to determine the differences in preference levels of Culinary Arts students toward Randang from Rajo-rajo restaurant and Selamat restaurant. A total of 50 untrained panelists conducted a hedonic test by evaluating four sensory attributes: color, aroma, texture, and taste.



**FIGURE 2.** Differences in the overall mean preference levels of Randang.

Based on the graph in **FIGURE 2** above, the overall preference score for Randang from Rajo-rajo Restaurant was 6.315, while the average preference score for Randang from Selamat Restaurant was 6.245. These results indicate that panelists tended to prefer Randang from Rajo-rajo Restaurant. Meanwhile, in terms of Randang, this can be seen in the graph below:



**FIGURE 3.** Difference in the mean preference levels of Randang aspects.

Based on the sensory aspects graph from **FIGURE 3** above, differences in the average preference level for Randang can be observed. For meat color, both Randang Rajo-rajo and Randang Selamat obtained the same average score of 6.24. However, for dadak color Randang Rajo-rajo obtained a higher average score of 6.58 compared to Randang Selamat which had an average score of 6.12. In terms of meat aroma, Randang Rajo-rajo obtained a score of 6.54 higher than Randang Selamat with a score of 6.30. For dadak aroma, Randang Rajo-rajo obtained an average score of 6.42 also higher than Randang Selamat with a score of 6.20.

On the other hand, for the meat texture, Randang Rajo-rajo obtained a lower average score of 5.66 compared to Randang Selamat which had a score of 6.54. Similarly for the dadak texture, Randang Rajo-rajo obtained a score of 6.24 slightly lower than Randang Selamat which had a score of 6.28. Meanwhile, for the meat taste Randang Rajo-rajo obtained a score of 6.28 higher than Randang Selamat with a score of 6.12. For the dadak taste, Randang Rajo-rajo obtained the highest average score of 6.56 compared to Randang Selamat which obtained a score of 6.16. These findings indicate a difference in the level of preference between the two types of Randang.

## Hypothesis Test

**TABLE 2.** T-Test of paired variables Randang Rajo-rajo and Randang Selamat.

		Paired Samples Test					t	df	Sig. (2-tailed)
		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
Lower	Upper								
Meat Color	Rajo-rajo & Selamat	.000	1.142	.161	-.324	.324	.000	49	1.000
Dadak Color	Rajo-rajo & Selamat	.460	1.073	.151	.155	.764	3.031	49	.004
Meat Aroma	Rajo-rajo & Selamat	.240	1.134	.160	-.082	.562	1.495	49	.141
Dadak Aroma	Rajo-rajo & Selamat	.220	1.233	.174	-.130	.570	1.261	49	.213
Meat Texture	Rajo-rajo & Selamat	-.880	1.206	.170	-1.222	-.537	-5.159	49	.000
Dadak Texture	Rajo-rajo & Selamat	-.040	1.524	.215	-.473	.393	-.185	49	.854
Meat Taste	Rajo-rajo & Selamat	.160	1.390	.196	-.235	.555	.814	49	.420
Dadak Taste	Rajo-rajo & Selamat	.400	1.069	.151	.096	.703	2.646	49	.011

Based on the T-test results listed in **TABLE 2** above, it can be concluded that there are significant differences in three sensory attributes, namely dadak color ( $P=0.004$ ), meat texture ( $P=0.000$ ), and dadak taste ( $P=0.004$ ). Meanwhile, other attributes such as meat color, meat aroma, dadak aroma, dadak texture, and meat taste did not show significant differences. This indicates that variations in ingredients and cooking methods produce different sensory perceptions in consumers.

## Discussion

The results of this study indicate a difference in the level of preference of Culinary Arts students for Randang from Rajo-rajo restaurant and Selamat restaurant. Overall, the panelists preferred Randang from Rajo-rajo restaurant which is characterized by its brownish color, savory and slightly sweet taste, tender but dense meat texture, dry and rough dadak texture compared to Selamat Randang which has a characteristic blackish color, tender and soft meat texture, moist and smooth dadak texture, and savory and slightly spicy taste.

When analyzed based on sensory attributes such as color, aroma, texture, and taste the differences in liking levels vary, as explained below:

### 1. Color

Color is the first visual aspect evaluated and plays a key role in food appeal. Randang is generally dark brown to black, a result of the long, drying cooking process (Mulyani & Elida, 2020). In this research, the color attributes tested were meat color and dadak color. There was no significant difference in meat color between the two types of Randang. This concludes that panelists equally preferred the color of the Randang meat from both restaurants.

Meanwhile, dadak color showed a difference between the two types of Randang. Panelists preferred the brownish dadak color of Rajo-rajo Randang over the blackish dadak color of Selamat Randang. This aligns with previous research (Elida et al., 2021), which stated that Randang generally acquires a blackish brown color due to the long cooking process and the ingredients used.

## 2. Aroma

Aroma is a factor that determines the level of acceptance of a food product. Aroma is the smell produced by food and can stimulate appetite (Ramadhanti & Gusnita, 2020). The distinctive aroma of Randang comes from the use of coconut milk, spices, and seasonings. In this study, the aroma attributes tested were meat aroma and dadak aroma. As a result, these two types of aromas showed no significant differences. This concluded that panelists equally liked the meat aroma and dadak aroma of Rajo-rajo and Selamat Randang.

Thus, it can be concluded that the aroma of both types of Randang received equal levels of preference from the panelists. This aligns with previous research, which explained that Randang has a distinctive, fragrant aroma derived from its spices and herbs (Mariana & Gusnita, 2020).

## 3. Texture

Texture is a food assessment directly related to the sense of touch. The tender texture of Randang is due to the long processing time and the use of low-fat meat (Amalia, 2019). Research on meat texture showed differences in panelists' preferences. Panelists preferred the soft and tender texture of Selamat Randang over the soft and dense texture of Rajo-rajo Randang.

Meanwhile, there was no difference in dadak texture between the two types of Randang. The panelists equally liked the dadak texture of both types of Randang. Rajo-rajo Randang had a dry and coarse dadak texture, while Selamat Randang had a moist and smooth dadak texture. Previous research also showed that the resulting Randang dadak was quite oily and the meat texture was quite soft due to the long processing time (Ikrar, 2021).

## 4. Taste

Taste is a key factor in evaluating a food product, significantly influencing its acceptability. The resulting Randang dish is savory and easily accepted (Amalia, 2019). The Randang taste studied included meat taste and dadak taste. The meat taste showed no difference between the two types. The panelists equally preferred the meat taste of both Rajo-rajo and Selamat Randang.

Meanwhile, for the dadak taste, there were differences in panelists' preferences for the two types of Randang. The panelists preferred the savory and sweet andang Rajo-rajo over the savory and spicy Randang Selamat. This aligns with research (Sahara Putri & Elida, 2022) which states that the savory flavor of Randang comes from the combination of ingredients and spices, creating a distinctive flavor combination.



**FIGURE 4.** Comparison of the appearance of Randang from Rajo-rajo (left) and Selamat (right).

These findings confirm that sensory attributes particularly color, texture, and flavor, play a significant role in shaping consumer preferences for Randang. Practically, this research provides insights for culinary businesses to tailor their products to consumer preferences and maintain their flavor. From an academic perspective, this research enriches the literature on hedonic testing of traditional foods. Meanwhile, from a cultural perspective, these results support the preservation of Randang as a Minangkabau culinary identity.

These findings are also relevant to current food industry trends that emphasize authentic local flavors and personalized tastes. Businesses can use these results to develop Randang variants that suit consumer preferences without losing the authenticity of Minangkabau culture. Furthermore, this research supports the importance of sensory testing as a scientific approach to traditional product innovation.

This study has several limitations, the panelists were culinary arts students who may have been familiar with the taste of Randang potentially leading to perceptual bias. Furthermore, the assessment of preferences was subjective

and could be influenced by psychological factors or individual habits. Further research is recommended to involve a more diverse panel of panelists to ensure the results are more representative of general public preferences.

## CONCLUSION

This study shows that there are differences in the level of preference of Culinary Arts students towards Randang from Rajo-rajo restaurant and Selamat restaurant. Overall, Randang from Rajo-rajo restaurant is preferred by panelists compared to Randang Selamat. Meanwhile, in terms of sensory aspects, it shows that there are significant differences such as in the dadak color, panelists prefer Randang Rajo-rajo, in terms of meat texture aspect, panelists prefer Randang Selamat, and the dadak taste that is preferred by panelists is Randang Rajo-rajo. Meanwhile, the aspects of meat color, meat aroma, dadak aroma, dadak texture, and meat taste do not show significant differences. In general, these differences in preferences are influenced by the sensory characteristics of each Randang, which results in varying levels of preference among Culinary Arts students.

These findings suggest that the level of preference for traditional foods is determined not only by the recipe itself, but also by the taste and sensory presentation that suit consumer preferences. Practically, the results of this study can be used by culinary entrepreneurs as a basis for improving product quality, developing diverse Randang variations, and developing menu strategies to appeal to a wider market.

From an academic perspective, this research can enrich the hedonic testing of traditional foods and demonstrate that sensory analysis can be a scientific approach to product innovation. Future research is recommended to involve respondents from diverse backgrounds and consider other variables to ensure the results reflect consumer preferences more comprehensively.

## ACKNOWLEDGMENTS

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