



Analysis of Elasticity and Sugar Content in Traditional Wajik Sasak Snack Menu

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Abstract: The purpose of this study was to determine the value of the modulus of elasticity and sugar content in Wajik snacks. Wajik is one of the traditional snacks that is popular with many people. The sweet and legit taste of wajik increases consumer interest in this product. This product is a semi-wet food made from glutinous rice, coconut milk and brown sugar. Coconut milk is a mandatory additional ingredient in making wajik, because the oil produced by coconut milk will produce a legit and savory taste. Coconut milk also produces fat in wajik. Elasticity was analyzed from 5 samples of wajik snacks and Analysis of sugar content (fructose, glucose, sucrose) was carried out using the high performance liquid chromatography (HPLC) method and total calorie analysis was carried out by adding calories from protein, fat, carbohydrate components or by calculation method. Protein content was analyzed using the Kjeldahl method, total fat analysis was carried out using the Weibull method, total carbohydrates were determined using the by difference method.

Keywords: Wajik; Elasticity; Sugar Content

Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the resu Wajik is a semi-wet food made from steamed glutinous rice which is then cooked with a mixture of coconut milk and brown sugar until the dough is oily and feels soft (Aidila Fitria et al., 2022; Maryanti et al., 2021). Coconut milk is one of the most important supporting ingredients in making wajik. Good coconut milk will produce a delicious taste, aroma and texture in this product. Coconut milk is one of the important ingredients in making wajik. Coconut milk that is suitable for wajik comes from old coconuts with thick flesh (Koswara et al., 2017). Coconut milk will produce oil and make wajik even more delicious. Wajik has a water content of around 10-40% and a water activity of 0.65-0.9% (Zakharia, 2012). The shelf life of wajik is 5-7 days at room temperature, the quality of semi-wet food production is influenced by raw

materials, production process technology, and the packaging used. Marlyn Triposa Veronika, et al (2022) stated that as part of a local product, the existence of Wajik Tape Melayu is an effort to maintain the cultural heritage of the local community, so it is worthy of being called a superior regional product (Trifosa Veronica et al., 2022). To be categorized as a superior regional product, it must meet several criteria, namely: having high competitiveness in the market; Utilizing the potential of local resources that have the potential to be developed; having high added value for rural communities; economically profitable and useful for increasing income and human resource capabilities; Worthy of being supported by credit capital assistance (Sudiar, 2019 in Veronika, et al., 2022). On this side, Wajik Tape Melayu basically has added value in the marketing world. As is known, one of the important aspects in marketing is the cultural environment (Dharmmesta, 2014 in Veronika, et al., 2022). The sweet

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and legit taste of wajik increases consumer interest in this product. This product is a semi-wet food made from glutinous rice, coconut milk and brown sugar. The elasticity and sweetness of wajik increasingly make traditional snack fans consume it. To make wajik a traditional snack, of course, the ingredients must be known and the proportions must be proportional in making it. According to research by Eddwina Aidila Fitria, et al. (2022), the results of the study showed that edible film had a very significant effect on the characteristics of wajik based on the free fatty acid test. The free fatty acid value in wajik on storage day-0 (0.02%), day 5 (0.04%), day 10 (0.06%), day 15 (0.12%) and day 20 (0.16%). Based on SNI 01-4272-1996, wajik coated with chitosan-PVA edible film can last up to the 10th day. The purpose of this study was to determine the free fatty acid value in wajik coated with chitosan PVA edible film until it reaches damage. Furthermore, research by Marlyn Triposa Veronika, et al. (2022) revealed the sugar content in food, the results of the study showed that milk tea drinks with boba toppings that were tested had high sugar and calorie content. One large glass of boba milk tea contains 47.21 grams of sugar (glucose, fructose, sucrose) and 675 kcal calories. So, boba milk tea drinks are high in sugar and calories. The purpose of this study was to assess the sugar content in this type of drink. Based on the above view, research to reveal the quality with indicators of elasticity and sugar content of traditional wajik snacks is still very minimal. Therefore, researchers are interested in studying the Analysis of Elasticity and Sugar Content in the Traditional Wajik Sasak Snack Menu. Its.

Method

Research Design

This study uses a literature study method. This method aims to collect, review, and analyze data from various literature sources that are relevant to the research topic on Analysis of Elasticity and Sugar Content in the Traditional Wajik Sasak Snack Menu. Literature study was chosen because it allows researchers to gain a deep and comprehensive understanding of the research subject through critical analysis of existing literature (Fiantika, 2022; Maulida, 2020; Sugiyono, 2015).

Data Sources

The data sources in this study are relevant and reliable literature, namely articles from national and international scientific journals that have gone through a peer-review process.

Data Collection Techniques

Data collection in literature studies is carried out through the following stages:

- a. Literature Identification: Identifying literature that is relevant to the research topic through academic databases such as Google Scholar, and Scopus.
- b. Literature Selection: Selecting literature that meets the inclusion criteria, such as relevance to the topic of wajik, science learning and publication years between 2015-2024.
- c. Literature Organization: Organizing selected literature based on certain categories or themes that are in accordance with the research objectives.
- d. Critical Review: Conducting a critical review of the collected literature to evaluate the quality and relevance of the information provided.

Data Analysis Techniques

The data collected from the literature were analyzed using the content analysis method which includes:

- a. Reading and Understanding: Reading the literature in depth to understand the main concepts and findings.
- b. Coding: Coding information relevant to the research topic, identifying main themes and sub-themes.
- c. Synthesis: Integrating findings from various literature sources to build a comprehensive picture of the research topic.
- d. Critique and Evaluation: Conducting critique and evaluation of the strengths and weaknesses of each literature source, and comparing and contrasting existing findings.

Validity and Reliability

To ensure validity and reliability in literature study research, the following steps were taken:

- a. Selection of Credible Sources: Only use literature from trusted sources that have gone through a peer-review process.
- b. Source Triangulation: Using multiple literature sources to ensure accuracy and consistency of information.
- c. Use of Inclusion and Exclusion Criteria: Establishing clear inclusion and exclusion criteria for the literature to be reviewed

Result and Discussion

Literature study data from several research journals related to the Analysis of Elasticity and Sugar Content in the Traditional Wajik Sasak Snack Menu can be seen in Table 1.

Table 1. Literature study from several research journals related to the Analysis of Elasticity and Sugar Content in the Traditional Wajik Sasak Snack Menu

No	Journal	Title	Autor	Research result
1	Biodiversitas, 19 (1), pp. 351-356. DOI: 10.13057/biodiv/d190148	Lipolytic bacteria isolated from Indonesian sticky rice cake wajik and jenang experiencing with rancidity.	Susilowati, Ari; Sari, Siti Lusi Arum; Setyaningsih, Ratna; Muthmainna, Hani'A Nur; Handarwati, Hayyu; Pangastuti, Artini; Purwoko, Tjahjadi (Susilowati et al., 2018)	The results showed that there were 7 lipolytic bacteria from 52 isolates. The bacteria were Gram-negative, round and rod-shaped. The identities of the four isolates obtained from wajik showed 97-98% similarity to <i>Acinetobacter</i> and one isolate showed 96% similarity to <i>Pseudomonas</i> . The last two isolates obtained from jenang manten had 99% similarity which were included in the <i>Serratia marcescens</i> species.
2	Journal of Ethnic Foods, 8 (1)	The Malay's traditional sweet, dodol: a review of the Malaysia's heritage delicacy alongside with the rendition of neighbouring countries	Ismail, Norsyahidaha; Muhammad Shahrim a; Che Ishak F.A.; Arsyad M.M.;Karnjamapratum, Supatrac; Sirison, Jiraporn (Ismail et al., 2021)	This article highlights the nostalgic and evergreen traditional Malay sweet known locally as dodol by discussing its history, types and names of dodol, as well as recipes, how to make it, how to cook it and packaging. Furthermore, this article is expected to help readers, especially among the younger generation in the world of Malay society to better understand and appreciate the beauty of their own culture.
3	Journal of Physics: Conference Series, 1282 (1), art. no. 012009.	Triangular fuzzy number in probabilistic fuzzy goal programming with pareto distribution	Susanti, Eka; Dwipurwani, Oki; Sitepu, Robinson; Wulandari; Natasia, Liani (Susanti et al., 2019)	The result was 4090 pieces of steamed sponge cake, 2026 pieces of layer cake, 438 pieces of bitter melon cake, 2620 pieces of peanut butter, 17 pieces of wajik and a membership degree of 0.9999991.
4	SAGU Journal - Agri. Sci. Tech., Maret 2022, Vol. 21: No. 1, Hal 38-42	Testing Of Free Fatty Acids On A Wajik Coated Edible Film Khitosan-PVA	Eddwina Aidila Fitria, I Ketut Budaraga, dan Samudera Zebua (Aidila Fitria et al., 2022)	The results of the study showed that edible film had a very significant effect on the characteristics of wajik based on the free fatty acid test. The free fatty acid value in wajik on storage day-0 (0.02%), day 5 (0.04%), day 10 (0.06%), day 15 (0.12%) and day 20 (0.16%). Based on SNI 01-4272-1996 wajik coated with chitosan-PVA edible film can last up to day 10.
5	AKSIOMA: Jurnal Program Studi Pendidikan Matematika; Volume 11, No. 4, 2022, 3412-3423	Konteks Kuliner Tradisional Sumatera Selatan Dalam Lkpd Pmri Berbasis Masalah Open Ended	Muslimin, Luvi Antari, Rohmatun Khasana, Bonita Hirza (Muslimin, Luvi Antari, Rohmatun Khasana, 2022)	The results of the data analysis obtained valid and practical LKPD. Valid can be seen from the results of the validator assessment, namely the construct validator, content

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validator, and language validator. In line with the readability of LKPD by students at the one-to-one stage. Practicality can be seen from the results of comments and responses from students at the small group stage that students are happy to use the developed LKPD. The results of the test data analysis that have been carried out at the field test stage obtained an average final score of students, namely 85.04, which indicates that student learning outcomes are included in the very good category, so it is concluded that the developed LKPD has a potential effect on student learning outcomes.

6	Agro Bali : Agricultural Journal; Vol. 6 No. 2: 405-412, July 2023	Inventory and Characterization Morphology and Agronomic of Pineapple Plants (<i>Ananas comosus</i> (L.) Merr) in Several Production Centers in Java Island, Indonesia	Henrietto Innosensius Prasetyo, Gede Wijana, Ida Ayu Putri Darmawati (Prasetyo et al., 2023)	The results of the study showed that the largest fruit producers were in four districts on Java Island. Pineapple plants found were intensively cultivated starting from seeding, planting, maintenance, harvesting, and post-harvest. Pineapple plants cultivated in Subang Regency are Subang Pineapple, Bogor Regency are Gati Pineapple and Kapas Pineapple, Pematang Regency is Honey Pineapple, and Kediri Regency is Honey Pineapple and Pasir Kelud 1. Based on the characterization results, Subang Pineapple and Pasir Kelud 1 Pineapple plants are categorized as Cayenne Varieties with characteristics of large fruit, sweet and sour taste, lots of water content, wide eyes and thornless leaves. Meanwhile, Gati Pineapple, Kapas Pineapple, Pematang Honey Pineapple, and Kediri Honey Pineapple are categorized as Queen Varieties with characteristics of small fruit, sweet taste, little water, protruding eyes, and thorny leaves. In addition to being sold and consumed fresh, pineapple also has the potential to be developed as processed ingredients such as pineapple chips, sweets, wajik, and dodol.
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7	Journal for the Education of Gifted Young Scientists, 7(3), 609-626, September 2019	Developing Physics Learning Tools Based on Local Wisdom in the Form of Musical Instrument of Gandrang Bulo Dance as Learning Source in Sound Wave	Mardhiyyatin Naqiyah, Dadan Rosana, Sukardiyono, Ernasari (Naqiyah & Rosana, 2019)	The results of the feasibility test show that the learning device is in the good and feasible category based on qualitative and quantitative assessments by experts, physics teachers, and colleagues with an average score of 26.4 - 35.2. In addition, the results of testing the learning device on 30 randomly selected students showed an average student response of 3.08 with a good category and feasible for use in the learning process on a larger scale. Furthermore, each stage of activity contained in the RPP has been carried out very well at each meeting based on observations of the implementation of learning with an achievement score reaching 80% - 100%
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Conclusion

This product is a semi-wet food made from glutinous rice, coconut milk and brown sugar. Coconut milk is a mandatory additional ingredient in making wajik, because the oil produced by coconut milk will produce a legit and savory taste. Coconut milk also produces fat in wajik. Elasticity was analyzed from 5 samples of wajik snacks and Analysis of sugar content (fructose, glucose, sucrose) was carried out using the high performance liquid chromatography (HPLC) method and total calorie analysis was carried out by adding calories from protein, fat, carbohydrate components or by calculation method. Protein content was analyzed using the Kjeldahl method, total fat analysis was carried out using the Weibull method, total carbohydrates were determined using the by difference method.

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