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The Formula of Jelly Drink Banana Fruit (*Musa paradisiaca* Typical) and Soybeans (*Glycine max* L. MERR) for Obesity

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Abstract: The diversity of food and beverage products is very important, especially for the needs of weight loss for obesesity. Therefore, the development of functional food sourced from local raw materials is needed. Therefore, the aim of this research is to find a jelly drink product formula made from bananas and soybeans for obesity sufferers. This research was a completely randomized design (CRD). Organoleptic tests on color, taste, aroma and texture parameters of three Jelly drink formula. The analysis of chemical and physical properties is obtained from the laboratory, and is followed by a test of satiety and desire to eat (desire to eat). Data analysis used descriptive statistical analysis and continued with Anova analysis. The results of this research found that the jelly drink formula (A) had the highest score of the jelly drink formula (B) and (C. The average test value of jelly drink formula (A) is higher than jelly drink formula (B) and (C). However, the chemical and physical properties tests between formula (A) and (B) and (C) have significant differences. Furthermore, formula (A) contains 24.27% ripe banana and soybeans, 1.45% carrageenan, 0.48% citric acid, and 0.97% tropicana slim sugar from a total of 206 grams of ingredients. Jelly drinks have the highest organoleptic value and nutritional content for suitable for obesesity. The results of the satiety test showed that 46.66 respondents felt full for 2.5 hours, and only 20 respondents felt full for 1.5 hours after consuming jelly drink products. Therefore, formula (A) can be as a functional food for obesity.

Keywords: Jelly drinks; Kepok bananas; Obesity; Soybeans

Introduction

Functional food is a type of food that has two main functions, first it can provide nutritional intake, and second sensory satisfaction such as good taste with good texture. Furthermore, the functional aspect is an important part of food products that contain nutritional needs and bioactive compounds, and function to maintain hydration, anti-aging, energy supply, and relaxation (Alamgir, 2017). Meanwhile, tertiary functional drinks such as probiotics, and intake of vitamins, certain minerals to increase body stamina and reduce the risk of disease (Ahmed et al., 2022). Functional drinks have three basic principles, namely; first the primary function of food is seen from the aspect of high nutrition, secondary functions such as sensory properties (attractive appearance and good taste), and third tertiary functions such as food that has properties, such as affects on the physiological aspect (positive influence on body health (Styburski et al., 2020).

Functional drinks are types of functional foods such as probiotics, additional vitamins and minerals to increase stamina and reduce the risk of disease (Raman et al., 2019). Martirosyan & Singh (2015) explained that functional foods are natural or processed food ingredients that contain bioactive components, such as local food ingredients from kepok bananas and soybeans. Yellow Kepok Banana (Musa paradisiaca forma typical) is one of the fruits that contains dietary fiber and antioxidants (Oyeyinka, & Afolayan, 2019). Nurfiliyah (2014) explained that there was a real interaction between the addition of acid and the addition of white Ambon banana aroma on the perception of satiety and desire to eat in overweight and obese

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panelists. Meanwhile, soybeans (*Glycine max L.* Merr) are a source of protein, fat, vitamins A, E, K, and vitamin B, and the protein content in soy products varies between 50% soy flour, 70% soy protein concentrate and 90% soy protein isolate (Winarsi, 2010). In addition, soybeans contain isoflavones which can improve the condition of Diabetes Mellitus (DM) (Chang et al., 2008), and (Feizollahzadeh et al., 2017), explaining that giving soy milk can reduce blood sugar levels by 19.5% in type II DM patients.

Processing of bananas and soybeans is generally still very simple, namely made into juice and milk. Bananas and soybeans can be processed into drinks that have many health benefits, namely jelly drinks. Meanwhile, the development of jelly drink products, such as soy milk, is very good using iota-carrageenan compared to kappa-carrageenan, which is a nutritious jelly drink product with low sugar content in overcoming the problems of current commercial jelly drinks (Permana et al., 2020). Another study explained that functional jelly products made from oranges can significantly suppress weight gain and fat deposits, so they can be a functional snack for anti-obesity (Peng et al., 2022). In addition, functional food products for snacking needs have a positive impact on diet quality (Nuru, & Mamang, 2015). Obesity is a health problem with increasing prevalence worldwide, and its causes are complex, and a number of innovative studies of dietary composition, pharmacological interventions have yielded important potential findings for prevention and treatment over the past decade (Williams et al., 2015). Meanwhile, obesity has become a health problem for Indonesian society. Therefore, functional food standards that include the composition and quality of total calories containing carbohydrate, protein, fat and fiber elements are a solution to help prevent the risk of obesity. (Susanto et al., 2019). In relation to the provision of functional food products, such as jelly drinks made from Kepok bananas and soybeans, it can help meet nutritional needs for obesity. Therefore, the purpose of this study is to find a jelly drink product formula using kepok banana and soybean as raw materials to meet the nutritional adequacy standards for obesity.

Method

This research was conducted in April to May 2024 at the Chemistry and Physics Laboratory of the University of Mataram, and the Bio-Chemistry Laboratory of the Faculty of Food Technology, University of Mataram. Meanwhile, the design of this study was an experimental study using a completely randomized design (CRD) with the formulation of bananas (ripe, half-ripe, and unripe), and soybeans, the research variables included control (P0), and treatment (P), and the mathematical model of the experimental design is:

$$Yij = \alpha + Ai + \epsilon ij \quad (1)$$

Description.

Yij: results of observations of jelly drinks made from bananas and soybeans with the i-th comparison level in the j-th replication, i: level of addition of bananas and soybeans j: replications of each treatment, α: general average, Ai: effect of addition bananas and soybeans at the 1st level, and εij: experimental error due to the influence of the ith treatment in the jth group

In this study, the tools used in this study were divided into three, namely: (1) Tools for making jelly drinks are blenders, plastic and bowls, (2) tools for organoleptic tests are pens, and organoleptic forms, and (3) Tools for analyzing nutrient and fiber content are porcelain cups, aluminum cups, watch glasses, test tubes, Erlenmeyer flasks, Kjeldahl flasks, Soxhlet, furnaces, ovens, pipettes, cotton, filter paper, bulbs, heating furnaces, measuring cups, analytical scales, desiccators, Whatman 42 paper, distillation flasks, fat flasks, centrifuges, spectrophotometers, pH meters, and incubators. Mineral testing was carried out using hot plates, Erlenmeyer flasks, 100 mL measuring flasks, glass wool, AAS (Atomic Absorption Spectrophotometer) Shimadzu brand type AA 7000, and UV-200-RS spectrophotometers. Furthermore, the main materials used in this study were bananas, soybeans, carrageenan, citric acid, and tropicana sugar, and materials for the needs of physical-chemical property analysis from the laboratory of the University of Mataram.

Furthermore, the implementation of this research is divided into two parts, namely preliminary research and main research. This preliminary research aims to obtain a jelly drink formula. The main research is organoleptic testing (color, aroma, taste, and texture), chemical and physical properties analysis covering nutritional content (carbohydrates, fats, proteins, and vitamins), pH, acidity, water content, crude fiber food), and viscosity, and analysis of the level of satiety, desire to eat and and the length of satiety after being given a jelly drink product. Meanwhile, the process of making jelly drinks refers to the Trilaksani et al (2013) methodology, the first stage is cutting raw materials such as fruits, adding other additional ingredients such as sugar, water, citric acid and seaweed, the second stage is grinding using a blender within ± 5 minutes and the last stage is packaging into jelly drinks.

Meanwhile, data analysis, at the organoleptic analysis stage is (a) Quantitative Descriptive Analysis (QDA) (Hunaefi, & Ulfah, 2019).) is the panelist

preparation stage, forum group discussion (FGD, (b) hedonic test is a test of the level of acceptance of respondents' preferences, (c) ranking test (Wijaya et al., 2011) using the scale method 1 = most preferred, 2 = normal or neutral 3 = least preferred, (d) acceptability test is a hedonic test on the attributes of taste, aroma, color, texture and overall, (f) analysis of desire to eat and referring to Nurfiliyah (2014) with the criteria for the level of satiety (1 = very hungry, 6 = very full) and the desire to eat score (1 = very want, 4 = very do not want). Furthermore, the analysis of chemical and physical properties of jelly drink products is to determine the quality of jelly drink products with basic ingredients of kapok bananas and soybeans. Furthermore, the parameters that are the objects jelly drink product analysis is: (1) water content, fiber (2) (3) protein, (4) fat, (5) carbohydrates, (6) vitamin C, (7) pH, (8) total acid, and (9) viscosity (thickness), and all were carried out in the laboratory of the University of Mataram. The first research data analysis was using descriptive statistical analysis to obtain percentage values (%), average, and standard deviation, and the second was using analysis of variance (ANOVA) with the help of Microsoft Excel 2013 and IBM Statistical Program Social Sciences (SPSS) version 25, which was continued with further Duncan's Multiple Range Test with a significant difference value with a p-value of less than 0.05 ($p<0.05$).

Result and Discussion

Raw Materials for Making Jelly Drinks.

The development of jelly drink products in the study used several raw materials, including: Kapok bananas based on the criteria for ripeness levels, namely; (a) ripe, (b) half-ripe, and (c) unripe, as in. The physical characteristics of ripe Kepok bananas are that 100% of the skin is yellow, half-ripe ± 50% of the skin is yellow, and unripe the skin is still predominantly green. Kapok bananas can be processed into a variety of products, such as flour, porridge, chips, drinks, jam, wine, vinegar, and sauces (Mengstu et al., 2021). Furthermore, kapok banana flour can reduce rancidity, the color of brown cooking oil becomes brighter (Kartikorini et al., 2023). Furthermore, soybeans (Glycine max) are a source of protein and can be developed into various food products, and can lower cholesterol in patients with type II hyperlipoproteinemia (Ramdath et al., 2017). Therefore, the development of jelly drink products in this study uses soy flour which has the function of increasing nutritional content, such as protein and vitamin C**.** Furthermore, Carrageenan is a material that has the function of forming gels and stabilizing food and sauce products, medicine, pharmaceuticals, and cosmetics (Bagal-Kestwal et al., 2019; Pacheco-Quito et al., 2017). Therefore, the development of jelly drink products in this study used carrageenan. Tropicana Slim (TS) is a series of sugar-free, low-fat, low-salt, and low-calorie products. The addition of sugar to each treatment aims to increase the deliciousness, especially for sweeteners with low sugar content needed for health. Citric acid is an inactive substance that functions as a medium for drugs and other active substances in pharmaceutical formulations (Lambros et al., 2022). Therefore, the jelly drink products in this study were added with TS and citric acid.

Jelly Drink Product Formulation

The jelly drink product (Figure 1) is the result of three formulas of banana fruit raw materials with other ingredients (soybeans, carrageenan, TS, and citric acid). The color of product (A) is brighter (B), and product (C) is grayish white. Other physical properties of the jelly drink product in this study are semi-solid form, chewy texture, and can be drunk with a straw.

Figure 1. Jelly drink product (A) = ripe banana, (B) = half-ripe banana and (C) unripe banana

Jelly drink products are the result of three formulas of banana fruit raw materials with other ingredients (soybeans, carrageenan, TS, and citric acid). The color of product formula (A) is brighter (B), and (C). Other physical properties that can be identified are semi-solid form, chewy texture, and can be drunk with a straw. The composition of the raw materials of the beverage product formula (Table 1), where the control (P0) is not

added with soy flour and the treatment (P) on products (A), (B) and (C) is added with soy flour. The composition of the raw materials in the product formula has an effect on the color, taste, aroma, and texture which are the objects of organoleptic assessment of respondents, and can describe the nutritional content of the product formula for the needs of nutritional adequacy (AKG), especially for the nutritional needs of obese people.

Table 1. Raw material formula for jelly drink products

Bahan (g)	P0	%	P	%
1. Ripe banana	100	32.67	50	24.27
2. Half-ripe banana	100	32.67	50	24.27
3Unripe banana	100	32.67	50	24.27
Soybean	0	0	50	24.27
5. Carrageenan	3	0.98	3	1.45
6. Citric acid	1	0.32	1	0.48
7. Tropicana slim sugar	2	0.65	2	0.97
Total	306		206	

Organoleptic Test of Jelly Drink Products

1. Respondents

The respondents of this study were 30 students from the University of Mataram. Furthermore, respondents were asked to fill out a questionnaire about: (1) age, (2) education, (3) weight and (4) height, and the complete composition of respondents based on age and education in this study, as in (Figure 2).

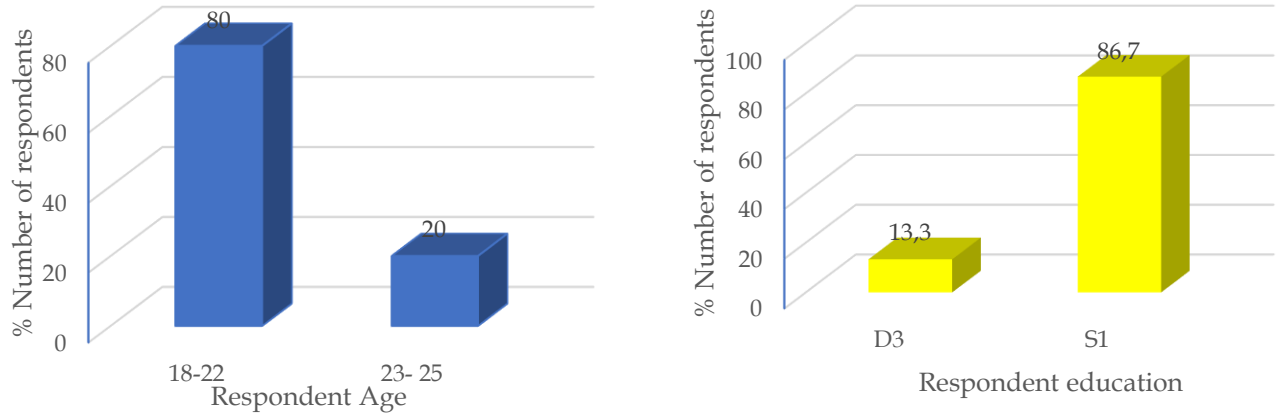

Figure 2. Age and education of respondents

2. Respondents' assessment of the color of the jelly drink product formula

The color of the product formula was assessed by 30 respondents, where product formula (A) had a higher score than product formulas (B) and (C). The score of formula (A) was 88 and an average of 2.9 with SD ± 39, the scores of formulas (B), and (C) were respectively 64 and an average of 2.1 with SD ± 22.5, and 67 and an average of 2.23 with SD ± 19. The results of the respondents' assessment showed that the treatment of formula (A) was preferred by respondents. However, the results of the Anova analysis showed a P-value> from the alpha value (α) of 0.05%. In this case, the colors of formulas (A), (B) and (C) did not differ significantly. This can be explained because other factors, such as habits, age have a strong influence on consumer acceptance (Crown, 2023). Although, the addition of soybeans can affect the color of the jelly drink product formula (Rosiana et al., 2023).

3. Respondents' assessment of the taste of the jelly drink product formula

Taste is a component of the jelly drink product that can determine the level of respondent acceptance. The taste of product formula (A) has a higher score than formulas (B), and (C). The formula score (A) is 87 and an average of 2.9 with SD ± 14.79, formula (B) 85 and an average of 2.93 with SD ± 1.15, and formula (C) 68 and an average of 2.26 with SD ± 4.61. Meanwhile, the results of the Anova analysis showed a P-value> from the alpha value (α) of 0.05%. In this case, the taste of each product formula does not differ significantly. Guichard (2022) explains that the content of raw materials, such as carbohydrates, is one of the parameters that can affect taste, and Puspitasari (2023) explains that beverage

products that contain soybeans and Kepok bananas tend to be more preferred.

4. Respondents' assessment of the aroma of jelly drink product formulas

The aroma of product formula (A) has a higher score than formulas (B) and (C). The score of formula (A) is 86 and an average of 2.9 with SD ± 14, and formulas (B) and (C) are respectively 84 and an average of 2.93 with SD ± 15.62, 73 and an average of 2.43 with SD ± 2.82. Meanwhile, the results of the Anova analysis showed a P-value> from the alpha value (α) 0.05. In this case, the aroma of each formula does not have a significant difference. The aroma of jelly drink products comes from other than raw materials, such as sugar and the addition of sucrose concentration at a certain level has a significant effect on the aroma of jelly drink products (Julianti et al., 2018).

5. Respondents' assessment of the texture of jelly drink products

The texture of product formula (A) has a higher score than formulas (B) and (C). Formula score (A) 80 and average 2.6 with SD ± 9.16, formula (B)) 78 and average 2.4 with SD ± 13, formula (C)) 67 and average 2.33 with SD ± 5.56. The results of the Anova analysis showed a P-value > from the alpha value (α) 0.05%. In this case, the texture of each jelly drink product formula does not have a significant difference.

6. Overall respondent's liking for the jelly drink product formula

The overall liking level test describes the level of respondent acceptance of the jelly drink product formula. Furthermore, the results of the Anova test at the α level (0.05) showed an F-hit value for formula (A) of 0.391, formula (B) F-hit value of 0.703, and formula (C) F-hit value of 0.361. In this case, the treatment did not show any significant difference in the overall level of respondent liking. However, the average value of overall preference of respondents in this study was found in formula (A) having a higher average preference value than the average value of formulas (B) and C, and only in the texture indicator formula (C) was higher than formulas (A, and B). This can be explained that the water content of formula C has a lower average value than formulas A and B. This is in accordance with the research of Mailidarni et al (2022) which states that the water content of the jelly drink product formula has a significant effect on texture. In this case, the control and treatment did not show any significant differences in the level of overall respondent agreement. However, the average value of overall respondent preference (Figure 3) shows that research sample (A) has an overall average value of respondent preference higher than the average value of samples (B) and C, and only in the texture indicator research sample (C) is higher than samples (A, and B). This can be explained based on the water content of research sample C having a lower average value than research samples A and B.

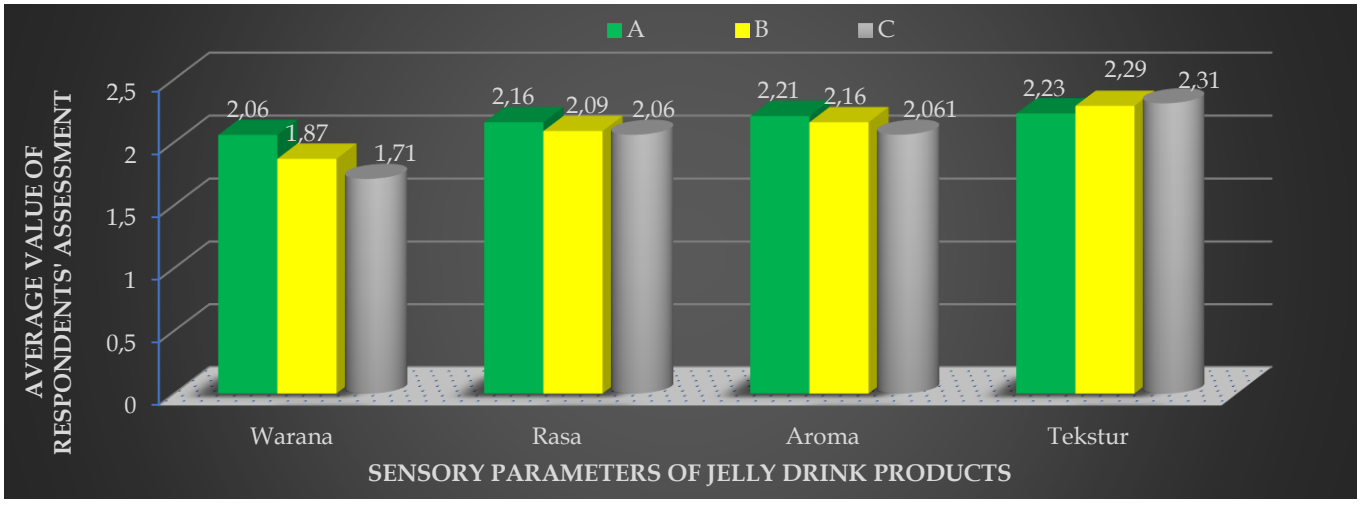

Figure 3. Average overall preference value for jelly drink products (A, B and C)

Chemical and Physical Characteristics of Jelly Beverage Products

The composition of physical and chemical properties of jelly beverage product formulas is a description of the amount of nutritional content and other properties of the jelly beverage product formula in this study. In this case, the average value of the composition of nutritional content and physical and chemical properties of formulas (A), (B) and (C), such as (Table 2). The results of laboratory analysis of the composition of the content of nine parameters of chemical and physical properties of jelly beverage products are control (P0) formula (C) has a carbohydrate content of 3.77%, (B) 3.38, (A) 2.65%.

Meanwhile, treat (P) formula (A) 0.46, %, (B) 2.64 %, and C 2.65%, the fat content of treat (P) formula (A) is 0.0079%, (B) 0.092% and (C) 0.083%, and the protein content of treat (P) formula (A) 0.19%, (B) 0.27%, and (C) 0.36% , as well as treatment vitamin content (P) formula (A) 3.49%, (B) 5.62%, and (C) 6.6%, total treatment acid (P) formula (A) 0.1%, (B) 0.1%, and (C) 0.08%, treatment pH (P) product (A) 4.56%, (B) 4.81%, (C) 5.27%, treatment fiber (P) formula (A) 11.28%, (B) 9.33%, and (C) 13.1%, treatment viscosity (P) formula (A) 3644%, (B) 6709%, and (C) 5880%, and treatment water content (P) formula (A) 95.96%, (B) 95.64%, and (C) 95.59%.

Table 2. Average values of chemical and physical properties parameters of jelly drink products

Treatment of jelly drink products	% average content of physical and chemical parameter values of jelly drink products								
	Carbohidrat	Fat	Protein	Water content	Total acid	pH	Vitamin C	Fiber	Viscosity
Ripe bananas (A)									
Average	1.338	0.006	0.140	95.713	0.128	4.345	2.842	4.608	3357.33
SD	0.995	0.001	0.045	0.384	0.023	0.182	0.501	3.346	487.131
Half-ripe bananas (B)									
Average	2.957	0.075	0.217	94.835	0.067	4.617	4.218	3.960	5939.667
SD	0.306	0.016	0.056	48.975	0.022	0.294	1.077	3.405	986.904
Unripe bananas (C)									
Average	3.302	0.068	0.262	94.660	0.063	5.210	4.763	7.812	5783.833
SD	0.442	0.009	0.077	0.649	0.010	0.051	1.443	4.511	56.251

The results of the Anova analysis (Table 3) show that the carbohydrate, protein, water content, total acid, vitamin C, viscosity of formula (A) vs (B) have a P-value < from the alpha value (α) 0.05%, but fat, pH and fiber have P-values > from the alpha value (α) 0.05%, formula (A) vs (C) carbohydrate, protein, water content, and vitamin C have P-values < from the alpha value (α) 0.05%, but fat, total acid, pH, fiber and viscosity have P-values > from the alpha value (α) 0.05%. Furthermore, for formula (B) vs (C) only pH has a P-value < from the alpha value (α) 0.05%.

Table 3. Results of Anova analysis of chemical and physical properties of jelly drink formula

Chemical and physical parameters Formula (A), (B) and C	Ripe bananas (A) vs Ripe bananas (B)		Ripe banana (A) vs Unripe banana C		P-value and Alpha = 5% Half-ripe banana (B) vs Unripe banana (C)	
	P-value	alpha (5%)	P-value	alpha (5%)	P-value	alpha (5%)
Karbohidrat	0.0034	0.05	0.0012	0.05	0.1468	0.05
Lemak	1.13E-06	0.05	1.43E-	0.05	0.3772	0.05
Protein	0.0252	0.05	0.0073	0.05	0.2723	0.05
Kadar air	0.0067	0.05	0.0065	0.05	0.9581	0.05
Total asam	0.00075	0.05	9.17E-	0.05	0.7401	0.05
pH	0.0836	0.05	5.573E-	0.05	0.0006	0.05
Vitamin C	0.0176	0.05	0.0115	0.05	0.4754	0.05
Serat	0.746	0.05	0.1926	0.05	0.1260	0.05
Viskositas	0.00018	0.05	2.66E-0	0.05	0.7074	0.05

Respondents' Satiety Level Assessment of Jelly Drink Products

The number of respondents was 15 people selected from 30 respondents at the organoleptic test stage. The main indicator of the 15 respondents in this study was the Body Mass Index (BMI) value. The results of the BMI analysis of respondents for the assessment of the satiety level of jelly drink products from the study were, as in (Table 4). The results of the respondents' assessment were 53.33% stated that they were somewhat full, 33.33% stated that they were hungry, and 6.66% stated that they were somewhat hungry and very hungry. Respondents' responses can explain their initial conditions which are the basis for the assessment stage of the desire to eat (disere to eat). Furthermore, Diere to eat, the results of the respondents' answers were 60% stated that they somewhat wanted to eat, and 40% stated that they wanted to eat. In this case, appetite is a description of the sensation felt when hungry (Ombrato & Phillips, 2021) and the parameters related to appetite are values that describe the sensation of satiety, such as responses commonly used in testing are hunger, desire to eat, satiety, and satisfaction (Andersen, & Hyldig, 2015).

Table 4. Body Mass Index (BMI) of respondents to jelly drink products, n=15

Category	description	IMT*	Number
Thin	Severe degree of underweight	<17.0	2
	Mild degree of underweight	17 – 18.5	2
Normal		18.5 -25	5
Fat	Mild degree of excess weight	>25.0 – 27.0	5
	Severe degree of overweight	> 27	1

The results of respondents' assessment of the duration of satiety for jelly drink products with formula (A) made from kapok bananas and soybeans, as in (Figure 2). The composition of respondents showed that the highest duration of satiety was 2.5 hours at 46.66%, and the lowest was at a duration of 1.5 hours at 20%. Meanwhile, the duration of satiety was 2 hours at 33.33%. This can explain that the development of jelly drink products with formula (A) can be a consumption option needed for obesity sufferers in meeting nutritional adequacy. Satiety is the influence of physiological and psychological traits (Benelam, 2009). Meanwhile, satiety is the response of the body's organs after consuming food or drinks, which can come from sensory, cognitive, digestive, and hormonal sources (Ni, et al., 2024). Assessment of satiety is quite important because it can be related to weight control and overcoming problems regarding eating behavior.

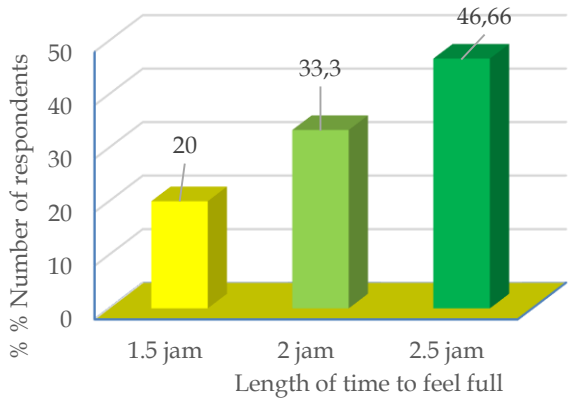

Figure 2. The duration of respondents' feeling of fullness after consuming jelly drink products

The nutritional content of product (A), as in (Table 2) shows a lower carbohydrate and fat content than products (B) and (C), but a higher protein and vitamin C content. However, the fiber content of product (A) is higher than (B) but lower than product (C). Furthermore, product (A) with a composition of 50 grams of kapok banana and 50 grams of soybean flour or 24.27% of the total product weight of 106 grams has a carbohydrate content of 0.49 grams, fat 0.008 grams, protein 0.20 grams, vitamin C 3.69 grams, and fiber 11.95 grams. Regulation of the Minister of Health of the Republic of Indonesia Number 28 of 2019 concerning the Recommended Nutritional Adequacy for Indonesian male people aged 16-29 years with a body weight of 60 kg and a height of 168 cm requires 65-75 grams of protein/day, total fat 75-85 grams/day, carbohydrates 400-430 grams/day, fiber 37 grams/day and water 2300-2500 ml/day. Meanwhile, for women aged 16-29 years with a body weight of 52-55 kg and a height of 159, they need 60-65 grams of protein/day, total fat 65-70 grams/day, carbohydrates 300-360 grams/day, fiber 29-32 grams/day and water 2150-2350 ml/day. Therefore, the nutritional content of jelly drink products (A) can be a consumption option for the needs of the Adequate Nutrition Intake (AKG), and can function as a snack to delay hunger and lose weight from the fiber content. In this case, Saputri et al., (2021) explained that porang-inulin jelly with a fiber content of 8.08 grams per cup can meet fiber needs of 47.5% of the adequate nutritional intake (AKG), and can reduce weight and BMI significantly. In addition, Yustina et al., (2011) explained that for the purpose of attraction and uniqueness that distinguishes it from other competitors, slimming jelly products that contain high fiber and low calories can function as snacks to delay hunger and are very good for health and can help diet programs to maintain health and lose weight (obesity).

Conclusion

The formula of jelly drink product (A) with treatment (P) has the highest organoleptic test value compared to products (B) and (C). Furthermore, the results of the sensory ANOVA test (color, taste, aroma, and texture) between products have a P-value > from the Alpha value = 5%, and can indicate that there is no significant difference in the results of the respondents' sensory assessment of the jelly drink product, and the results of the ANOVA test of carbohydrate, protein, water content, total acid, pH and viscosity values between products (A) vs (B) have a P-value < from the Alpha value = 5%, but for the fat and vitamin C parameters have a P-value > from the Alpha value = 5%. Meanwhile, the results of the respondents' assessment of the jelly drink product are the duration of feeling full since starting to eat, the highest is 2.5 hours or two hours and thirty minutes at 46.66%, and the lowest is with a duration of 1.5 hours or one hour and thirty minutes at 20%, and product formula (A) with ripe banana and soybean as the basic ingredient can function as a snack to delay hunger and lose weight for obesity.

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Author Contributions
All authors have made significant contributions to completing this manuscript.

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Conflicts of Interest
Author declares that there is no conflicts of interest.

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