Acceptability of cookies substituted with mocaf flour and varied with red bean flour and herbal chicken gizzard

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Abstract. Acceptability is an important factor in the success of additional feeding programs in the form of cookies in malnourished toddlers. The purpose of this study was to find out the acceptability of cookies that are substituted with mocaf flour, and varied with red bean flour, and herbal chicken gizzard. This experimental study was conducted using a completely randomized design using 3 factors and 3 treatments (C1, C2 and C3), namely each treatment used the same amount of mocaf flour, namely 120 g, red bean flour each 110 g, 100 g, 90 g and herbal chicken gizzard 20 g, 30 g and 40 g. Acceptance test was conducted on 30 toddlers aged 2-5 years in the Medan Tuntungan Health Center Work Area. The data were analyzed using the Kruskal-Wallis test and continued with the Mann-Whitney test. Based on the results of data analysis, it shows that organoleptic assessment based on flavour, color, taste, texture and form of treatment C1 is classified as favorable, while treatment C2 and C3 is classified as less favorable. The results of the Kruskal Wallis test proved that there were differences between the three cookie treatments (p<0.05), and the Mann-Whitney test results showed that the C1-treated cookies were significantly different from the C2 and C3 treatments (p<0.05). In conclusion, cookies with mocaf flour substitution (120g) which were varied with more red bean flour (110g) and less gizzard (20g) had the best acceptability, so that it can be used as an additional food for the improvement of nutrition of toddlers with less nutrition.

1. Introduction

Toddlers become one of the groups prone to nutritional problems, where this needs to be the focus of serious problems because of the negative effects that will arise if the toddler is malnourished. The endurance of malnourished toddlers tends to be low, this is what makes toddlers easily exposed to infectious diseases, which will then have an impact on their nutritional status [1].

Malnutrition in toddlers will have a major impact on brain development, intellectual, physical growth, and metabolic barriers. This then leads to decreased cognitive ability, impairs learning achievement, decreased immunity, and can increase the risk of degenerative diseases.

Nearly 3 in 10 toddlers suffer from stunting based on their age, and 1 in 10 toddlers experience less weight based on their age [2]. In Indonesia, the amount of malnutrition in toddlers based on BB/U, there has been no significant decrease in the last 5 years, the amount of malnutrition in 2013 by 13.9 percent and in 2018 to 13.8 percent [3]. The amount of malnutrition and malnutrition in North Sumatra
Province in 2017 based on BB / U obtained measurement results of 18.4 percent, which consists of malnutrition by 5.3 percent, and malnutrition by 13.1 percent [4].

Food intake is a direct cause of malnutrition in toddlers. This occurs due to insufficient daily nutrient fulfillment that lasts for a certain time [5]. One of the efforts in supporting the fulfillment of nutrients in toddlers conducted by the government, namely by Supplementary Feeding (PMT). PMT to be given can be in the form of biscuits or cookies.

Cookies is one type of bikuit that is very liked by everyone, especially toddlers, because it tastes sweet, also a little savory. In the process of making cookies, it is very easy to add local nutrient-rich ingredients to the composition of cookie ingredients, which is done in the process of mixing the composition of dry ingredients, which is then mixed with binders, so that in an effort to increase nutrient intake in toddlers nutrition is not very suitable to do. Cookies also have an interesting form, therefore they are widely used in measures to improve nutrition. Local food products are rich in nutrients, which can be used to make cookies such as kidney beans, and animal protein sources such as offal (chicken gizzard) which has been often overlooked.

Based on the results of the study Jumirah et al (2019), the manufacture of baby porridge with a mixture of banana varietas awak, red beans, liver and herbal chicken feet can increase the content of macro nutrients such as protein by 14.07%, fat by 11.31%, carbohydrates by 61.18%, energy by 397.36%, dietary fiber by 6.2%, ash content by 2.67%, and micronutrients including vitamin A by 1919.92 μgRE, vitamin C at 48.23 mg, calcium 1.26%, Phosphorus by 0.56%, iron 19.69 mg, and zinc 5.55 mg [6].

Therefore, in encouraging government efforts to overcome the problem of malnutrition in toddlers, researchers want to use local food products, namely mocaf flour, red beans, and herbal chicken gizzard, in the process of making cookies. Based on these considerations, it is necessary to conduct a study on the assessment of the acceptability of cookies substituted mocaf flour, and varied with red bean flour and herbal chicken gizzard as an additional food toddler.

2. Materials and Method
The type in this study was an experiment with Complete Randomized Design, using 3 factors and 3 cookie treatments. The data analysis uses the Kruskall-Wallis test to see whether there was a difference in each cookie treatment, followed by the Mann Whitney test to determine which cookie is preferred. Cookie processing was conducted in the Laboratory of the Faculty of Public Health, Universitas Sumatera Utara. The implementation time of the study is March to August 2021. The main ingredients in this cookie are mocaf flour, red beans, and herbal chicken gizzard, while other supporting ingredients such as butter, sugar flour, milk powder, and plastic clip. The equipment used to make cookies is hand mixer, basin, spoon, scale, gas stove, oven, and plastic clip.

The study is divided into 2 stages. First, formulate the product with 3 treatments. The composition of the first treatment material (C1) consists of 120 g mocaf flour, 110 g of red bean flour, and 20 g of herbal chicken gizzard flour. The composition of the second treatment material (C2) consists of 120 g mocaf flour, 100 g of red bean flour, and 30 g of herbal chicken gizzard flour. The composition of the third treatment material (C3) consists of 120 g of mocaf flour, 90 g of red bean flour, and 40 g of herbal chicken gizzard flour. In each treatment was given the addition of 150 g of sugar flour, 25 g of milk powder, 200 g of butter, and 1 egg yolk. The second stage is an organoleptic test analysis of cookies based on the parameters of aroma, color, taste, texture, and shape of cookies.

3. Results and Discussions
3.1. Cookie Specifications Subsite Mocaf Flour, Red Beans and Herbal Chicken Gizzard
Cookie specifications indicate that from three cookie treatments of mocaf flour subsite, red beans, and herbal chicken gizzard, different specifications and cookie results are obtained. From the specifications of cookies C1, has a brown color, vanilla-scented milk and red beans, has a very
crunchy texture, has a savory sweet taste and red beans, and flower-shaped. While in the C2 and C3 cookies, there is an addition of the aroma and distinctive taste of chicken gizzard. Comparison of cookie specifications is in Table 1 below:

Table 1. Specifications of mocaf flour subsite cookies, red beans, and herbal chicken gizzard

| Specifications          | C1                                | C2                                      | C3                                      |
|------------------------|-----------------------------------|-----------------------------------------|-----------------------------------------|
| Color                  | Brown                             | Brownish yellow                         | Brownish yellow                         |
| Aroma                  | Vanilla milk and red bean aroma   | Vanilla milk, red bean, and a hint of   | Vanilla milk, and dominant Chicken      |
|                        |                                   | Chicken gizzard aroma                   | gizzard aroma                           |
| Texture                | Very crunchy                       | Crunchy                                 | Crunchy                                 |
| Flavor                 | Typical cookies, sweet, savory,   | Typical Cookies, sweet, savory, red     | Typical cookies and dominant chicken    |
|                        | and red beans                      | beans and a hint of chicken gizzard     | gizzard,                               |
| Shapes                 | Flower with three chocochips       | Leave with two chocochips               | Cloud with one chocochips               |

Note:
C1: Comparison of the composition of the main ingredients (120 g mocaf flour, 110 g of red bean flour, and 20 g of herbal chicken gizzard flour).
C2: Comparison of the composition of the main ingredients (120 g mocaf flour, 100 g of red bean flour, and 30 g of herbal chicken gizzard flour).
C3: Comparison of the composition of the main ingredients (120 g of mocaf flour, 90 g of red bean flour, and 40 g of herbal chicken gizzard flour).

3.2. Organoleptic Test Results Based on Aromas In Cookies Subsite Mocaf Flour, Red Beans, and Herbal Chicken Gizzard

Organoleptic assessment test results based on aroma showed, only C1 cookies that fall into the preferred category, which is at intervals of 78-100%, with a percentage gain of 88.8%. While the C2 and C3 cookies fall into the less favored category, which is at intervals of 56-79.99%. The results of organoleptic test assessment of cookies against aromas are contained in Figure 1 below:

Figure 1. The results of organoleptic test results cookie subsite mocaf flour, red beans and herbal chicken gizzard based on aroma.
To prove the difference in organoleptic assessment based on aroma in C1, C2, and C3 cookies, it was analyzed with Kruskal-Wallis test because the data is not distributed normally. The test result obtained a value of sig=0.000, meaning there is a very meaningful difference between the C1, C2, and C3 cookies. To prove that the C1 cookie is different from the C2, and C3 cookies, the Mann Whitney test was conducted and it was obtained that, there is a significant difference between the results of the assessment of the aroma of the C1 cookie with C2, and C2 with C3 with sig= 0.000, and 0.020, respectively, whereas between the C2 and C3 cookies there is no noticeable difference, obtained sig= 0.210.

Aroma is one of the very important factors in setting the level of consumer acceptance in a food product. The enjoyment of taste in food is often determined by its aroma. When a food product has a distinctive and interesting aroma, then the food product will tend to be preferred, so in processing a food aroma specification is very important to consider.

Based on the results of organoleptic test assessment of cookie aromas showed, C2 cookies are cookies that get the lowest score of 56 or 62.2% in the less like category. C1 cookies are the cookies that score the highest by 80 or 88.8% in the likes category. This proves that, from the specifics of the scent, the C1 cookie is the most preferred cookie.

Kruskall-Wallis Test results based on the scent of cookies C1, C2, and C3, obtained a value sig= 0.000 or \( \rho < \alpha \) (0.05). From these results prove, there are significant differences in the variety of cookie treatment that is substituted with mocaf flour, red beans, and herbal chicken gizzard produced. Then, to prove that the C1 cookie has a difference with other cookies, it is analyzed further using the Mann Whitney test where it is shown that, between the C1 and C2 cookies, and the C1 cookie with C3 there is a noticeable difference and obtained the values sig= 0.000, and 0.020, but between the C2 cookie and C3 there is no significant difference with the value sig = 0.21. The test results prove that the C1 cookie is the most preferred cookie based on aroma characteristics, and the C1 cookie is shown to have significant differences with the C2, and C3 cookies.

The C1 cookie is the cookie with the least chicken gizzard composition. chicken gizzard has a strong distinctive aroma, which causes the less chicken gizzard composition used then the aroma of cookies will be preferred, and in cookies C1 has the composition of the most red bean flour, which then causes the aroma of cookies will be preferred where the aroma of red beans is soft flavor.

This result is in line with Dinda, et al (2019) which indicates, aroma puree (pancake) modification, which has the most red bean composition and moringa leaves are least preferred respondents, obtained a mean rank = 2.50. The increasing composition of red beans added makes the aroma of puree become more increased. The aroma of cookies is also influenced by other mixed ingredients such as the use of butter, eggs, temperature and duration of roasting dough at the time of roasting [ 7].

3.3. Organoleptic Test Results Based on Color On Cookies Subsite Mocaf Flour, Red Beans, and Herbal Chicken Gizzard.

Organoleptic assessment test results based on color showed that only C1 cookies fall into the preferred category, which is at intervals of 78-100%, with a percentage gain of 81.11%. While the C2 and C3 cookies fall into the less favored category, which is at intervals of 56-79.99%. The results of the assessment of organoleptic test of cookies against color are contained in Figure 2 below:
To prove the difference in organoleptic assessment based on color in C1, C2, and C3 cookies, it was analyzed with Kruskall-Wallis test because the data is not distributed normally. The test result obtained a sig= value of 0.013, meaning there is a significant difference between the C1, C2, and C3 cookies. To prove that the C1 cookie is different from the C2, and C3 cookies, a Mann Whitney test was conducted and it was obtained that, there is a significant difference between the assessment of the color of the C1 cookie and C3, the value sig= 0.002, but between the C1 cookie with C2, and C2 with C3 there is no difference, with the values sig= 0.104 and 0.279 respectively.

While consumers do not yet know the specifications of food products, color is the main assessment. Color is very important in assessing food products that will affect the consumer's acceptability. The color produced in food products is influenced by pigments, the temperature in sugar (caramel), there is a reaction between sugar and amino acids, as well as the influence of other ingredients. Organoleptic test results prove that C3 cookies get the lowest score of 55 or 61.1% in the less like category. C2 cookies scored 62 or 68.8% in the less like category. While the C1 cookie gets the most score of 73 or 81.1%. So it can be concluded that, C1 cookies are the most preferred cookies and the only ones that are in the category of likes.

Kruskall-Wallis Test Results based on the color of cookies C1, C2, and C3, obtained a value sig= 0.013 ie or p < α (0.05). From these results prove, there are significant differences in the variety of cookie treatment that is subsited with mocaf flour, red beans, and herbal chicken gizzard produced. Then, to prove the C1 cookie has a difference with other cookies, it is analyzed using the Mann Whitney test where it is shown that, between the C1 and C3 cookies there is a noticeable difference in the value sig= 0.002 , but between the C1 and C2 cookies, and the C2 cookie with C3 there is no noticeable difference obtained by the sig= 0.104 and 0.279 respectively. The test results prove that the C1 cookie is the most preferred cookie based on color characteristics, and the C1 cookie is shown to have a noticeable difference with the C1 cookie with C3.

The color of the C1 cookie is the preferred one where there is a greater composition of red bean flour than other cookies, which then causes the color of the C1 cookie to smell browned. Red flour also contains high carbohydrates and proteins similar to green beans, soybeans and peanuts. Red beans also contain greater fiber compared to rice, wheat, sorghum, and corn. Protein contained in red beans is also useful to lower levels of LDL cholesterol that is not good in health, also raise levels of HDL cholesterol that is beneficial for the health of the body [8].

This result is in line with Windha,et al (2020) showing, the difference in the composition treatment of red beans on the Snack bar gives a noticeable difference in the parameters of taste and color with values p = 0.01 and p = 0.01. However there is no difference based on the texture parameters and the aroma obtained the value p=0.96 and aroma p=0.88. The C1 cookie is yellow-brown like a regular cookie. This is because when processing cookies are not added with food coloring, which only expects the color of mixing ingredients only. The resulting color is the result of mixing red bean flour which
has a brownish color, chicken gizzard flour that tends to be yellow, as well as the addition of other ingredients such as egg yolk and butter which then produce an attractive cookie color [9].

3.4. Organoleptic Test Results Based on Taste In Cookies Subsite Mocaf Flour, Red Beans, and Herbal chicken gizzard.

Organoleptic assessment test results based on taste showed that only C1 cookies fall into the preferred category, which is at intervals of 78-100%, with a percentage gain of 88.88%, C2 cookies fall into the less preferred category, which is at intervals of 56-79.99%, and C3 cookies fall into the unfavorable category, which is at intervals of 34-55.99%. The results of organoleptic test assessment of cookies on taste are contained in Figure 3 follows:

![Figure 3. Organoleptic test results of mocaf flour subsite, red beans and herbal chicken ampela based on flavor](image)

To prove the difference in organoleptic assessment based on taste in C1, C2, and C3 cookies, it was analyzed with Kruskall-Wallis test because the data is not distributed normally. The test result is sig=0.000, meaning there is a very meaningful difference between C1, C2, and C3 cookies. To prove that the C1 cookie is different from the C2, and C3 cookies, the Mann Whitney test was conducted and it was obtained that, there is a significant difference between the results of the assessment of taste in the C1 cookie with C2, C1 with C3, C2 with C3, obtained respectively sig= values= 0.011, 0.000, and 0.000.

In food products taste that is the key to acceptance or not of the product. As much as any nutrients contained in food products but the taste is not liked then it will not be accepted by consumers. Taste is created from a mixture of all ingredients that become the composition of food products. Taste is the result of assessment by several senses such as vision, smell, taste, and taste. Organoleptic test results based on taste, C3 cookies scored the lowest by 42 or 46.6% in the less like category. C2 cookies scored 65 or 72.2% in the less like category. But the C1 cookie gets the highest score of 80 or 88.8%. So it can be concluded that, C1 cookies are the most preferred cookies and the only ones that are in the category of likes.

Kruskall-Wallis Test results based on the taste of cookies C1, C2, and C3, obtained a value sig= 0.000 ie or ρ < α (0.05). From these results prove, there are significant differences in the variety of cookie treatment that is subsited with mocaf flour, red beans, and herbal chicken gizzard produced. Then, to prove the C1 cookie has differences with other cookies, it is analyzed using the Mann Whitney test where it is shown that, between the C1 and C2 cookies, C1 with C3, and C2 with C3 there are noticeable differences obtained by each sig= 0.011, 0.000, and 0.000. The test results prove that the C1 cookie is the most preferred cookie based on taste characteristics, and the C1 cookie is shown to have significant differences with the C2, and C3 cookies.

The taste of the C1 cookie is the most preferred, this can happen because in cookies C1 has the least composition of sandstarch among other cookies. Ampela has a strong taste, so cookies with the least ampela composition are preferred by consumers. In cookies C1 has the most red bean flour composition compared to other cookies which will add flavor to the cookie C1.
This result is in line with Nurul, et al (2015) showed, there is an influence and a noticeable
difference between the parameters of the taste of red bean flour cookies X0 with X1, X2, X3 and X4
where obtained niai the highest mean is found in X4 (4.34) with a category of very flavored red beans.
Usernn the composition of red bean flour is getting more and more pronounced the taste of red beans
in cookies. This result also showed, there is a noticeable difference to the respondent's preference for
15 flavors of red bean flour cookies with a variety of variations where the mean value of the highest
favorite taste cookies is X2 (4.30) with a category of very likes [10].

3.5. Organoleptic Test Results Based on Texture On Mocaf Flour Subsite Cookies, Red Beans, and
Herbal Chicken Gizzard.

Organoleptic assessment results based on texture showed that only C1 cookies were in the preferred
category, which is at intervals of 78-100%, with a percentage gain of 82.22%. While the C2 and C3
cookies fall into the less preferred category, which is at intervals of 56-79.99%, the results of the
assessment of the organoleptic test of cookies against textures are found in Figure 4 follows:

Figure 4. Organoleptic Test Results Cookie Subsite Mocaf Flour, Red Beans and Herbal Chicken
Gizzard Based on Texture

To prove the difference in organoleptic assessment based on texture in C1, C2, and C3 cookies, it
was analyzed with Kruskall-Wallis test because the data is not distributed normally. The test result
obtained a sig value of 0.004, meaning there is a significant difference between the C1, C2, and C3
cookies. To prove that the C1 cookie is different from the C2, and C3 cookies, the Mann Whitney test
was conducted and it was obtained that, there is a significant difference between the assessment of the
texture of C1 and C3 obtained sig= 0.001, but between C1 and C2, and C2 with C3 there is no
noticeable difference, obtained sig= 0.142 and 0.059 respectively.

Texture is related to softness and coolness which is one of the sensory factors in food products. In
distinguishing texture, the sense used is the sense of taste by using the tongue and the inside of the oral
cavity. Organoleptic test results based on texture showed that C3 cookies scored the lowest score of 53
or 58.8% in the less like category. C2 cookies score 65 or 72.2% in the less like category. But the C1
cookie scored the highest at 74 or 84.4%. So it can be concluded that, C1 cookies are the most
preferred cookies and the only ones that are in the category of likes.

Kruskall-Wallis Test results based on the taste of cookies C1, C2, and C3, obtained a value sig=
0.004 ie or p < α (0.05). From these results prove, there are significant differences in the variety of
cookie treatment that is subsited with mocaf flour, red beans, and herbal chicken gizzard produced.
Then, to prove the C1 cookie has a difference with other cookies, it is analyzed further using the Mann
Whitney test where it is shown that, between the C1 cookie and C3 there is a meaningful difference
obtained sig= value = 0.001, while C1 with C2, and C2 with C3 there is no meaningful difference
obtained respectively sig= value = 0.142 and 0.059. Test results prove that the C1 cookie is the most
preferred cookie based on texture characteristics, and the C1 cookie is shown to have significant
differences with the C2, and C3 cookies.

In this study, researchers used mocaf flour to subsite wheat flour because in comparison of cookie
making using mocaf flour with wheat flour, the texture of cookies that use mocaf flour gets a crisper
texture. In the organoleptic assessment, the favorite cookie texture is the C1 cookie, which has a less chicken gizzard flour composition. Before becoming chicken gizzard flour, chicken gizzard goes through various processing processes such as washing, boiling, drying, to milling. In the drying process the ampela will remove the oil from its fat, causing at the time of grinding has a less smooth texture compared to when grinding red beans. This is why respondents prefer cookies with the least composition of sandpaper flour. C1 cookies have a very crisp texture that makes cookies easily digested by toddlers. The crispy texture of the cookies was also obtained because the researchers only used the yolk part only, then the researchers also added butter and butter so as to make the texture of cookies become very crispy.

This result is in accordance with lilis research, et al (2019) pointed out that, there is a very meaningful difference between the texture parameters and the aroma of cookies added red bean flour and taro flour obtained sig= 0.000 and 0.002 [10].

3.6. Organoleptic Test Results Based on Forms On Cookies Subsite Mocaf Flour, Red Beans, and Herbal Chicken Gizzard.

Organoleptic assessment test results based on form show that only C1 cookies fall into the preferred category, which is at intervals of 78-100%, with a percentage gain of 91.11%, C2 cookies fall into the less preferred category, which is at intervals of 56-79.99%, and C3 cookies fall into the unfavorable category, which is at intervals of 34-55.99%. The results of the assessment of organoleptic test of cookies on the form are contained in Figure 3 follows:

![Figure 5. Organoleptic test results of mocaf flour subsite cookies, red beans and herbal chicken gizzard based on shapes.](image)

To prove the difference in organoleptic assessment results based on the form of cookies C1, C2, and C3, it is analyzed with Kruskal Wallis test because the data is not distributed normally. The test result obtained a sig= value of 0.000, meaning there is a very meaningful difference between the C1, C2, and C3 cookies. To prove the C1 cookie is different from the C2, and C3 cookies, the Mann Whitney test was conducted and it was obtained that, there is a significant difference between the assessment results of the C1 form with C2, C1 with C3, and C2 with C3 obtained sig=0.000, 0.000, and 0.020, respectively.

Shapes becomes one of the most important assessment components to assess the quality of a product. If the product has a good shape, it will be easier to attract the attention of consumers to try the product, on the contrary if a product has a less attractive shape, then the product will not be tried by consumers. The shape of a product must be adjusted to the target product, so that the target is interested in trying the product. In this study, respondents in the study were toddlers aged 2-5 years. Therefore, researchers use the shape of flowers, leaves, and clouds in getting the attention of toddlers. These results show that the C1 cookie is the most preferred cookie for toddlers, namely cookies with flower characters that are then added to cocochips on top.

Based on the results of organoleptic test assessment of the form of cookies showed, C3 cookies get the lowest score of 45 or 50.0% in the less like category. C2 cookies scored 58 or 64.4% in the less
like category. But the C1 cookie scored the highest at 82 or 91.1%. So it can be concluded that, C1 cookies are the most preferred cookies and the only ones that are in the category of likes. C1 cookies have an eye-catching shape because they are formed using cookie molds, using characters that toddlers like, then researchers also add chocochips on top that make cookies preferable.

Kruskall-Wallis Test Results based on the form of cookies C1, C2 and C3 obtained a value sig=0.000 or ρ < α (0.05). From these results prove, there are significant differences in the variety of cookie treatment that is subsited with mocaf flour, red beans, and herbal chicken ampela produced. Then, to prove the C1 cookie has differences with other cookies, it is analyzed further using the Mann Whitney test where it is shown that, there are noticeable differences between the C1 and C2 cookies, C1 with C3, and C2 with C3 obtained by sig=0.000, 0.000, and 0.020, respectively.

3.7. Results of Acceptability Test Cookie Subsite Flour Mocaf, Red Beans, and Herbal Chicken Gizzard.

In Table 2, it is shown that the average organoleptic rating score of cookies is 77.8 or 86.44% and the lowest average score is 51.8 or 57.55%.

| Caracteristic | Cookies | Krusskal Wallis Test |
|--------------|---------|---------------------|
|              | C1      | C2      | C3      |
| Score        | %       | Score    | %       | Score   | %       | p      |
| Aroma        | 80      | 88.8    | 56      | 62.22   | 64      | 71.11  | 0.000  |
| Color        | 73      | 81.11   | 62      | 68.88   | 55      | 61.11  | 0.013  |
| Flavor       | 80      | 88.8    | 65      | 72.22   | 42      | 46.66  | 0.004  |
| Texture      | 74      | 82.22   | 65      | 72.22   | 53      | 58.88  | 0.000  |
| Shapes       | 82      | 91.11   | 58      | 64.44   | 45      | 50.00  | 0.000  |
| Mean         | 77,8    | 86,44   | 61,2    | 67,99   | 51,8    | 57,55  |

Kruskall-Wallis test results based on aroma specifications, colors, flavors, textures, and cookie forms show, there are significant differences between all specifications in cookies C1, C2, and C3, obtained sig= 0.000, 0.013, 0.004, 0.000, and 0.000. In Table 3, the average value of the highest aroma, color, taste, texture, and shape specifications is found in cookie C1 with a mean value of 2.59. It is followed by the C2 cookie with a mean value of 2.04, and the C3 cookie with a mean value of 1.72. The average value of aroma specifications, colors, flavors, textures, and forms of cookies, can be seen as follows:

| Caracteristic | Cookies | |
|--------------|---------|---|
|              | C1      | C2      | C3 |
| Mean         | 2,67    | 1,87    | 2,13    | 0,90 |
| Std. Deviation | 0,47    | 0,73    | 0,90    |
| Aroma        | 2,43    | 2,07    | 1,83    | 0,74 |
| Color        | 2,67    | 2,17    | 1,40    | 0,72 |
| Flavor       | 2,47    | 2,17    | 1,77    | 0,81 |
| Texture      | 2,73    | 1,93    | 1,50    | 0,68 |
| Shapes       | 2,73    | 0,45    | 1,72    | 0,77 |
| Mean         | 2,59    | 2,04    | 1,72    | 0,77 |
4. **Conclusion**

Cookies C1 is the composition of mocaf flour subsite cookies, red beans, and herbal chicken gizzard that toddlers like best based on the parameters of aroma, color, taste, texture, and shape, with an average score of 77.8 or 86.44%. From the results of organoleptic test assessments show that, only C1 cookies fall into the preferred category, which is at intervals of 78-100% of all parameters. Based on the parameters of aroma, color, taste, texture, and shape, the C1 cookie obtained 88.8%, 81.11%, 88.8%, 82.2%, and 91.1% respectively.

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