Hedonic Test of Pegagan Chocolate Products at PT XYZ

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ABSTRACT

Handling of raw materials for cocoa beans is an important process to maintain the quality of the processed chocolate. There are several stages carried out in the post-harvest cocoa process including fruit picking, fruit breaking, cocoa bean fermentation, drying cocoa beans and storage. The purpose of this study was to determine whether or not a sensory assessment of the preference for pegagan chocolate was made, and to analyze the panellists' level of acceptance of pegagan chocolate. Pegagan leaf chocolate is produced with the aim of providing good nutrition, brain multivitamins and memory enhancers. Sensory assessment of the hedonic test using 20 untrained panellists from the parameters measured were color, taste, texture, aroma and shape. The panellists' acceptance of chocolate with the addition of pegagan leaves was that the majority liked the chocolate on all parameters.

1. INTRODUCTION

Cocoa (Theobroma cacao) is one of the plantation commodities in Indonesia that plays an important role in the national economy. Cocoa bean production continues to increase and significantly. Cocoa plantation products in Indonesia are of low quality due to various reasons such as the very diverse understanding of farmers and lack of understanding of handling cocoa or cocoa beans properly, especially in terms of post-harvest handling. There are several things that cause the handling of cocoa beans to be less than optimal, resulting in low quality cocoa, namely not fermenting well, not dry enough, non-uniform bean size, high skin content, high acidity, very diverse and inconsistent flavors. The stages of postharvest handling of cocoa are generally divided into ripening of cocoa pods,

fermentation, drying, sorting, packaging and warehousing. Good and correct postharvest handling of cocoa is expected to produce high quality cocoa beans, in accordance with the applicable cocoa bean quality standards, namely the SNI 2323-2008/Amendment 1:2010 standard and also in accordance with consumer demand, especially the cocoa processing industry. Ripening of cocoa pods, fermentation and drying are important processes that must be carried out because they can improve the taste of the cocoa produced. Good handling of raw materials is expected to produce good chocolate products as well. Handling of raw materials is very important because all materials and products must be handled properly so that they can achieve their goals safely and also to maintain the condition and quality of the materials handled. Chocolate is a food product that is processed by cocoa beans derived from the cocoa plant (Theobroma cacao, L). Chocolate products are a combination of chocolate paste, sugar, cocoa butter and several types of additional flavors as variants. The potential and advantages of processed cocoa into chocolate can be used as functional food products. Processed cocoa products have different properties compared to other processed food products, not because of their good taste and nutrition, but because of their properties that are not shared by other foods, namely being solid at room temperature, brittle when broken and melts completely at body temperature (Lipp & Anklam, 1998). Currently, there are many foods that have a positive effect on health. The addition of *pegagan* leaves to chocolate has many benefits including as a brain multivitamin for memory enhancement, antiseptic, fever reducer, acne and ulcer medication. Sensory assessment with hedonic test is one type of acceptance test of a product. This test aims to determine the nature and factors of taste and acceptability of food. The main factors that are assessed include appearance which includes color, shape, size, aroma, texture and taste. Based on this background, the processing of chocolate products greatly affects the proper handling of raw materials. Hedonic testing on chocolate is expected to give a good impression on consumer preferences for the product. Because in this case it will affect the treatment in every handling of raw materials which also affects the flavor, texture, aroma and others (Lemarcq et al., 2022).

2. MATERIALS AND METHODS

2.1. Materials

The material used in this study was chocolate bar which was obtained from a PT XYZ in Yogyakarta.

2.2. Research Methods

Data collection is done by giving a set of written questions to respondents to answer. This data collection is through google form. Panellists were asked to express their likes or dislikes about pegagan chocolate products. The scale of the level of preference for the pegagan chocolate product:
1) Scale 1: Very dislike
2) Scale 2: Dislike
3) Scale 3: Like
4) Scale 4: I really like it

3. RESULT AND DISCUSSION

Hedonic test is a test in organoleptic sensory analysis that is used to determine the magnitude of the difference in quality between several similar products by providing an assessment or score on certain properties of a product and to determine the level of preference of a product. This level of preference is called a hedonic scale, for example, like very much, like, somewhat like, somewhat dislike, dislike, very dislike, and so on. The preference test is usually within a certain time of acceptance or preference. The hedonic test

uses a large number of respondents. The principle of the hedonic test is that panellists are asked to respond individually regarding their likes or dislikes for the commodity being assessed, and respond with their level of liking or disliking in the form of a hedonic scale. In the analysis, the hedonic scale is transformed into a numerical scale with increasing numbers according to the level of preference. In the food sector, this hedonic test is used in terms of marketing, namely to obtain consumer opinions on new products, this is necessary to determine whether or not further improvements to a new product are needed before being marketed, as well as to find out which products are most favored by consumers for new products. This is necessary to determine whether or not further improvements to a new product are needed before it is marketed, as well as to find out which products are most favored by consumers (Arif et al., 2017; Hasyim, 2011).

The results of the percentage of hedonic tests on chocolate with parameters of aroma, texture, taste, color and shape are presented in Figure 1-5. Aroma is something that can be observed with the sense of smell. To produce an aroma from an odor, odorous substances must be able to evaporate, slightly soluble in water or in fat. Testing of odors is important because it quickly gives results of an assessment of the product about whether the product is accepted or not. Odor is also used as an indicator of product damage. From the results of testing by 20 untrained panellists that the aroma of chocolate products with the addition of pegagan leaves as many as 15 people or 75% really like the aroma of the chocolate product and 5 people or 25% like the aroma (Besung, 2009; Maulana et al., 2017).
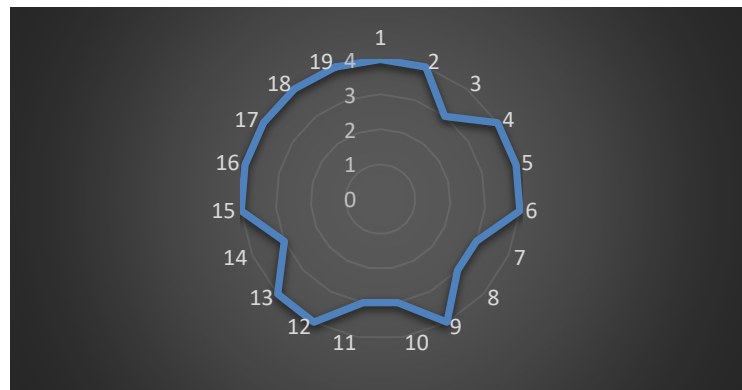

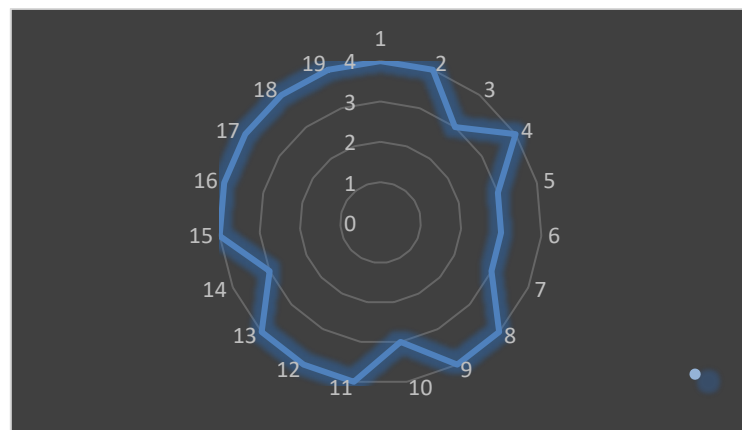Figure 1. Hedonic test spider web with aroma parameter

Figure 2. Hedonic test spider web with texture parameters

The texture and consistency of food ingredients greatly affect the taste caused by the ingredients used. The texture and viscosity of the material can change the taste and odor that arise because they can affect the stimulation of the olfactory receptor cells and salivary

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glands. The types of texture sensing include wetness (juiciness), dry, hard, smooth, rough and oily. From the test results by 20 untrained panellists that the texture of the chocolate product with the addition of pegagan leaves as many as 14 people or 70% really like the texture of the chocolate product and 6 people or 30% like the texture (Rosalizan et al., 2008).
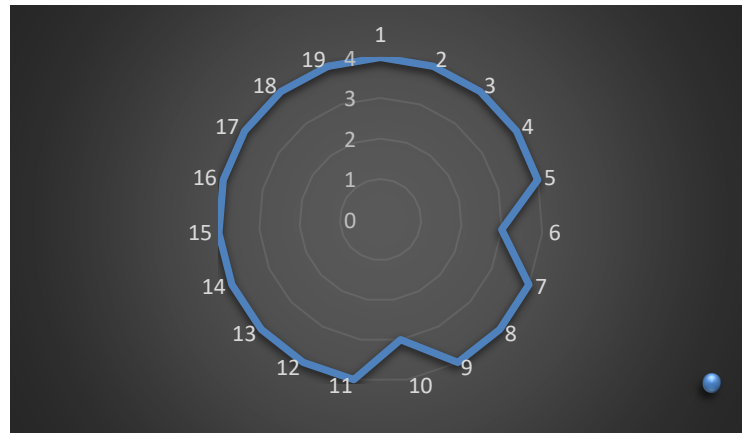

Figure 3. Hedonic test spider web with taste parameters

There are 4 basic tastes, namely sweet, salty, sour and bitter. These four basic qualities affect the concentration in a food ingredient. In general, food ingredients do not consist of one taste but a combination of various flavors to form a complete taste. From the test results by 20 untrained panellists that the taste of chocolate products with the addition of pegagan leaves as many as 19 people or 95% really like the taste of the chocolate product and 1 person or 5% like the taste (Asyik & Ansi, 2018).
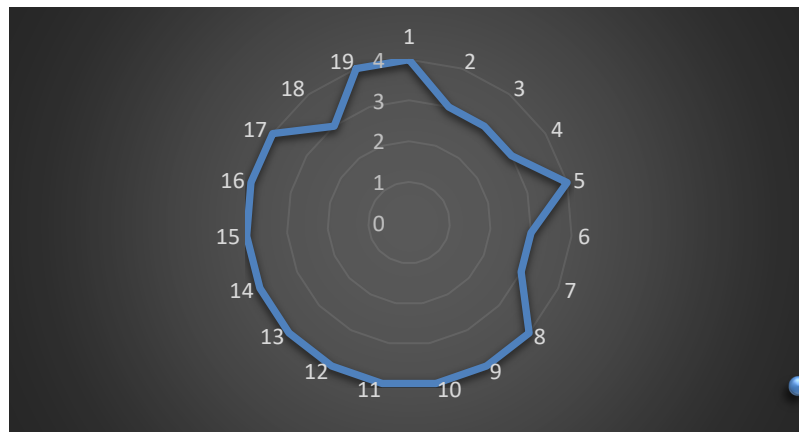

Figure 4. Hedonic test spider web with color parameter

Color is a material property that is ascribed to the spread of the light spectrum. The appearance of color is limited by the presence of a light source. Color is not a substance or object but a person's sensation because there are stimuli and radiation energy that falls into the eye senses. From the test results by 20 untrained panellists that the color of the chocolate product with the addition of pegagan leaves as many as 13 people or 65% really like the color of the chocolate product and 7 people or 35% like the color (Barisic et al., 2019; Setyaningsih et al., 2010).
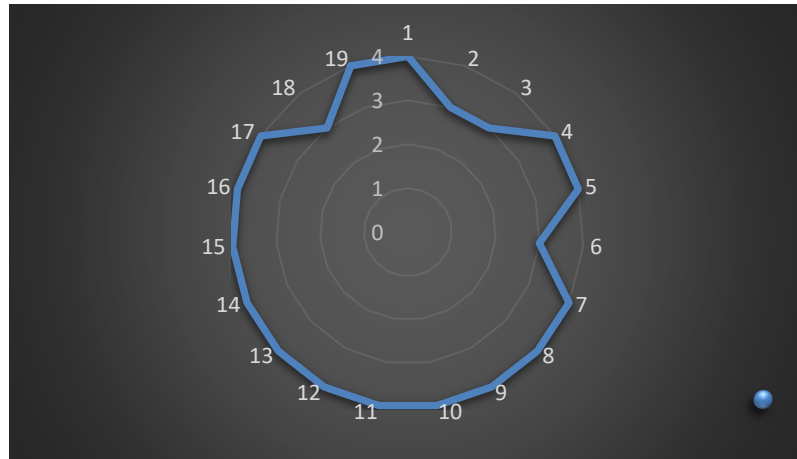
Figure 5. Hedonic test spider web with shape parameter

Testing in the form / appearance of food is measured based on the things that appear in the food product. Generally, with this food testing can increase consumer appeal to a product. From the results of testing by 20 untrained panellists that the shape or appearance of the chocolate product with the addition of pegagan leaves as many as 15 people or 75% really like the shape or appearance of the chocolate product and 5 people or 25% like the shape or appearance.

4. CONCLUSIONS

The level of panellist acceptance of chocolate with the addition of pegagan leaves was as much as 75% of panellists really liked the aroma of chocolate products, 70% really liked the texture of chocolate products, 95% really liked the taste of chocolate products, 65% really liked the color of chocolate products, and 75% really like the shape or appearance of the chocolate product.

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