

HEDONIC TESTING OF MARKETING LIP TINT PRODUCTS

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Abstract. How the acceptance of a product by consumers can be assessed, one of which is through a **hedonic test** or a preference test that can be used as a benchmark for producers before the product is marketed. Therefore, the purpose of this study is to determine how a researcher conducts a **hedonic test** on a product circulating in the market where respondents are not informed in advance of the brand of the product and are placed in the same packaging to avoid subjectivity and the impression of being associated with a particular brand, the samples tested came from 6 brands of **lip tint** preparations in the marketing area of Bandung city. The method used in this study is a descriptive method that is carried out by observation using a **questionnaire** as a test tool, filling out the **questionnaire** from respondents who provide answers to samples that provide sensory responses that provide assessments with a series of points. between 1 and 5, because the conclusion can be drawn from the six samples tested, which obtained the highest score among 20 respondents. The results obtained from the six samples taken during the test carried out by respondents showed that sample number 4 was the sample that had the highest score from observations of texture, color, and odor among other samples based on respondent observations.

Keywords: *Hedonic Test; Lip Tint; Questionnaire*

Introduction

Cosmetic preparations have been known since the emergence of human civilization and are still used today, which we call the modern era. The very rapid development of

cosmetic preparations continues to advance until the types and applications become more and more diverse and innovations continue to emerge to provide the best quality to consumers and consumers. Competition between the cosmetics industry today also favors various developments.

The widely used basic cosmetic preparations include decorative cosmetic preparations and also care cosmetic preparations, from head to toe everything is now touched by cosmetic products. However, developments that combine decorative cosmetics with care cosmetics are currently a trend in society, because modern people want practicality and also like it when a product has multiple uses.

Accordingly, the basic decorative cosmetics include lip cosmetic preparations, from which other benefits are expected in addition to coloring the lips. Meanwhile, lips are a very sensitive part of the body and do not have melanin pigments and hair roots as protection from the external environment, which makes the lips vulnerable to free radicals and direct sunlight, resulting in dry or cracked lips. Dryness and cracking, so that the color of the lips becomes dark, can also cause a feeling of pain and discomfort. To avoid this, cosmetic products are required that contain pigments as antioxidants that serve to protect and nourish the lips. (Sholehah, Malahayati and Hakim 2022).

Lip tint is a cosmetic product designed to give the lips a more fluid, natural color. Lip tint preparations that are quickly absorbed and produce a natural color similar to the original color of the lips provide a light touch, a natural look, and provide moisture and nutrients (Aulia and Widowati, 2018), so lip tint preparations offer uses as decorative cosmetics and nourishing cosmetics in one product.

In this study, lip tint preparations were selected based on the responses to all samples provided by the respondents. The sample selection of lip tint preparations was done due to consumer interest in this type of product, which is reflected in the great demand for this product, which is not only limited to the domestic market but also to foreign markets.

Sensory testing plays an important role in product development by minimizing risks in decision making. Respondents can identify sensory characteristics that help describe the product. Sensory evaluation can be used to assess desirable or undesirable changes to a product or formulation ingredient, identify areas for development, determine whether optimization has been achieved, evaluate competing products, observe changes that occur during processing or storage, and provide data necessary for product promotion. Consumer acceptance and preferences, as well as correlations between sensory and chemical or physical measurements, can also be obtained through sensory evaluation.

In addition to responsible safety aspects, cosmetic care products are characterized by an appealing aesthetic appearance from the packaging to the dosage form itself,

namely through the organoleptic or sensory assessment of their color, smell and texture. In order for cosmetics to become competitive, market-accepted and high-selling products when sold as consumables, consumers of cosmetic care products decide whether the product is accepted by the consumer or not. For this reason, evaluations to determine the acceptance of a product among product users are important as a basis for decision-making for designing suitable formulations to ensure sufficient consumer acceptance.

Sensory evaluation, also called organoleptic evaluation or sensory assessment, is one of the most primitive assessment methods. Sensory evaluation became a field of science after the assessment procedures were standardized, rationalized, linked to an objective assessment, data analysis became more systematic and statistical methods were used in analysis and decision-making. Organoleptic evaluation is very often used for quality assessment in the food industry and other agricultural product industries. Sometimes this evaluation can provide very thorough evaluation results. In some cases, the judgment of the senses exceeds even the precision of the most sensitive tools.

Organoleptic assessment or also called sensory assessment or sensory assessment is an assessment method that has been known for a long time and is still very commonly used. This assessment method is widely used because it can be applied quickly and directly. In some cases, sensory assessment has better accuracy compared to the most sensitive measuring instruments (Meilgaard et al, 2016). The application of organoleptic assessment in practice is called organoleptic testing which is carried out with certain procedures. This test will produce data that is further analyzed using statistical methods (Kartika, 1992). Organoleptic testing is a way to measure, assess or test the quality of commodities using the sensitivity of human sensory organs, namely the eyes, nose, mouth, and fingertips. Organoleptic testing is also called subjective measurement based on human subjective responses as a measuring tool (Soekarto, 1990). Organoleptic assessment is widely used to assess quality in the food industry and other agricultural product industries. This assessment can sometimes provide very comprehensive assessment results. Assessment with the senses in some cases even exceeds the accuracy of the most sensitive tools, one of which is the hedonic test (liking). A liking test is basically a test in which respondents express their responses in the form of whether they are happy or not with the properties of the material being tested.

A liking test is also called a hedonic test. Respondents are asked for their personal feedback on whether they like or dislike. In addition, respondents also express their level of liking. This level of liking is called a hedonic scale. For example, in the case of "like" it can have a hedonic scale such as: very, very much like, very much like, like, quite like. Conversely, if the idea of "dislike" can have a hedonic scale such as like and somewhat similar, there is a response called neutral, which is neither like nor dislike.

The hedonic scale can be stretched or compressed depending on the desired scale range. The hedonic scale can also be converted into a numerical scale with quality ratings according to preference level. Statistical analyses can be performed on these numerical data. The use of hedonic scales can be used in practice to determine differences. Therefore, hedonic tests are often used for organoleptic evaluation of raw materials or similar development products. Hedonic tests are often used to evaluate final products.

Therefore, in this research, the problem arises how to apply an example of a patient/consumer acceptance test called “Hedonic Test” because this test is an important aspect that cannot be ignored, especially in the manufacture of a consumer product which in this case is a decorative cosmetic product and lip care or lip tint preparations.

Methodology

This research was conducted using a descriptive observational study focused on Bandung city, where a questionnaire was administered to respondents on organoleptic sensory responses to samples of several brands of lip tints without allowing respondents to see the packaging or brand of the lipstick samples tested.

1. Tools and Materials

The equipment used in this research is a questionnaire as a research tool and also samples which are lip tint representing three price ranges, namely two samples with prices below Rp. 50,000.00 to represent relative prices, two samples with a price range between Rp. 50,000.00 and Rp. 100,000.00 which represents the middle price and two samples with prices above Rp. 100,000.00 represents a relatively expensive price, the sample was obtained from an online market or online store in Bandung city area. Researchers select samples that are most popular or purchased by consumers and can be searched based on reviews in the online store that offers the product.

2. Preparing Respondents

The researchers involved in this study were 20 respondents with intrinsic and extrinsic criteria as follows:

- Intrinsic criteria: female, aged 20-50, able to communicate well, willing to take hedonic tests and complete questionnaires, and have sensory sensitivity to the five senses.
- Extrinsic criteria: have limitations in responding to sensory perceptions.

3. How to Present Samples

Hedonic test samples should be presented and coded randomly. When giving a rating, respondents are not allowed to repeat the rating or compare the examples presented.

So, to an untrained respondent, samples must be presented one at a time so that the respondent does not compare one sample with another.

4. How to Score

The hedonic test assessment must be spontaneous. Respondents can then complete a questionnaire. In this case, respondents first performed an acceptance test for lip tints on 6 types of brands and the rating was made on 5 preference levels. Then proceed to the hedonic test.

5. Observation Table

Respondent Name :

Sample Type : Lip Tint

Number of Samples : 6

Testing Date :

Instructions: Test the samples from left to right, complete the testing and assessment of each sample thoroughly and then neutralize your sight and smell for 1 minute. Then continue for other samples up to the 6th sample.

Hedonic/Like Test

Give a rating based on the following scale:

- 1 = Very Dislike
- 2 = Dislike
- 3 = Regular/Neutral
- 4 = Like
- 5 = Very Like

Sample ID	Evaluation Criteria		
	Texture	Color	Odor

6. Research Variables

The research utilizes a single variable, which is the level of preference for serum-based cosmetic products in terms of the texture, color, and scent of lip tint from six brands available on the online market in Bandung City.

7. Data Analysis Techniques

The data analysis employed by the researcher is quantitative descriptive analysis, based on a Likert scale where the highest score is calculated by dividing it with the maximum score for each indicator.

The data analysis activities include:

1) Scoring

Scoring involves assigning numerical values to responses to obtain quantitative data. In this study, the scores are given based on the respondents' level of preference, as follows:

- Strongly like: score of 5
- Like: score of 4
- Neutral: score of 3
- Dislike: score of 2
- Strongly dislike: score of 1

2) Tabulation

Tabulation is the systematic and comprehensive grouping of responses, followed by counting and summarizing the data in tabular form.

8. Analysis of Respondent Preference Measurement

Respondent preferences were enhanced by calculating the percentage for each question indicator (texture, color, and scent) using the formula from Sugiyono (2010).

$$\% = \frac{\text{Total Score Obtained}}{\text{Maximum Score}} \times 100\%$$

Respondents' preference scale range :

- Strongly like : 81-100%
- Like : 61-80%
- Neutral : 41- 60%
- Dislike : 21-40%
- Strongly dislike : 0-20%

Results and Discussion

Based on the hedonic test results for lip tint, the findings are as follows:

1. Hedonic Test of Lip Tint's Texture

The hedonic test on the texture of lip tint preparations was conducted through direct observation of the six samples used as test subjects. A high preference level represents the texture appearance most favored by respondents, as shown in Table 1 below.

Table 1. Hedonic Test of Lip Tint's Texture

Respondent	Sample					
	1	2	3	4	5	6
R1	3	3	4	5	5	4
R2	2	4	3	3	4	5
R3	4	3	2	5	5	4
R4	5	2	2	4	4	4
R5	2	3	3	5	4	3
R6	3	2	2	4	5	3
R7	2	3	4	3	4	4
R8	4	5	4	5	5	4
R9	3	3	3	3	3	3
R10	2	2	3	4	3	2
R11	5	5	5	5	5	5
R12	3	4	4	3	3	2
R13	5	2	3	5	5	5
R14	3	3	4	3	3	3
R15	2	2	3	3	3	2
R16	4	3	4	5	5	5
R17	4	4	4	5	3	4
R18	3	3	3	5	4	4
R19	4	3	4	4	4	5
R20	3	2	3	5	4	3
Total Score	66	61	67	83	81	74

Description:

- R = Respondent
- Preference Level 1 = Strongly Dislike
- Preference Level 2 = Dislike
- Preference Level 3 = Neutral
- Preference Level 4 = Like
- Preference Level 5 = Strongly Like

Based on the responses given by respondents for the six lip tint samples in terms of texture, it was found that Sample 4 achieved the highest total score

compared to the other five samples, with a score of 83. When converted to preference levels according to Sugiyono (2010), this score falls into the "strongly like" category. Samples 5 and 6 secured the second and third places with scores of 81 and 74, respectively, meaning that Sample 5 is also in the "strongly like" category, while Sample 6 falls under the "like" category.

2. Hedonic Test of Lip Tint's Color

The hedonic test for color was conducted through direct observation of the six sample preparations. A high preference level represents the color appearance most frequently chosen by respondents, as shown in Table 2.

Tabel 2. Hedonic Test of Lip Tint's Color

Respondent	Sample					
	1	2	3	4	5	6
R1	4	3	4	5	5	2
R2	2	4	3	3	4	5
R3	4	3	2	5	5	4
R4	5	2	2	5	4	4
R5	2	3	3	5	4	3
R6	3	2	2	3	5	3
R7	2	3	4	5	4	4
R8	4	5	4	5	5	4
R9	3	3	3	4	3	3
R10	2	2	3	2	3	2
R11	5	5	5	5	5	5
R12	3	4	4	3	5	5
R13	5	2	3	5	5	5
R14	3	5	4	4	3	3
R15	2	2	3	4	3	2
R16	4	3	4	5	5	5
R17	4	4	4	4	3	4
R18	3	3	3	5	5	4
R19	4	3	4	4	4	5
R20	3	2	3	5	5	2
Total Score	67	63	67	86	85	74

Description:

- R = Respondent
- Preference Level 1 = Strongly Dislike
- Preference Level 2 = Dislike

- Preference Level 3 = Neutral
- Preference Level 4 = Like
- Preference Level 5 = Strongly Like

Based on the responses given by respondents for the six lip tint samples in terms of color, it was found that Sample 4 achieved the highest total score compared to the other five samples, with a score of 86. When converted to preference levels according to Sugiyono (2010), this score falls into the "strongly like" category. Meanwhile, Samples 1, 2, 3, and 6 each fall into the "like" category, while Sample 5 is also in the "strongly like" category.

3. Hedonic Test of Lip Tint's Odor

The hedonic test or evaluation of odor, or scent, was conducted through direct observation of the six preparations used as test samples. A high preference level represents the scent most favored by respondents, as shown in Table 3.

Table 3. Hedonic Test of Lip Tint's Odor

Respondent	Sample					
	1	2	3	4	5	6
R1	3	5	5	5	5	5
R2	2	5	3	5	4	5
R3	4	3	2	5	5	4
R4	5	2	2	4	4	4
R5	2	3	3	5	4	3
R6	3	2	2	5	5	3
R7	2	3	4	3	4	4
R8	4	5	4	5	5	4
R9	3	3	3	5	3	3
R10	2	2	3	3	3	2
R11	5	5	5	5	5	5
R12	3	4	4	3	5	5
R13	5	2	3	2	5	5
R14	3	5	4	4	3	3
R15	2	2	3	2	3	2
R16	4	3	4	5	5	5
R17	4	4	4	3	3	4
R18	2	2	2	4	4	3
R19	4	3	4	5	2	5
R20	3	3	3	5	3	3
Total Score	65	66	67	82	80	77

Description:

- R = Respondent

- Preference Level 1 = Strongly Dislike
- Preference Level 2 = Dislike
- Preference Level 3 = Neutral
- Preference Level 4 = Like
- Preference Level 5 = Strongly Like

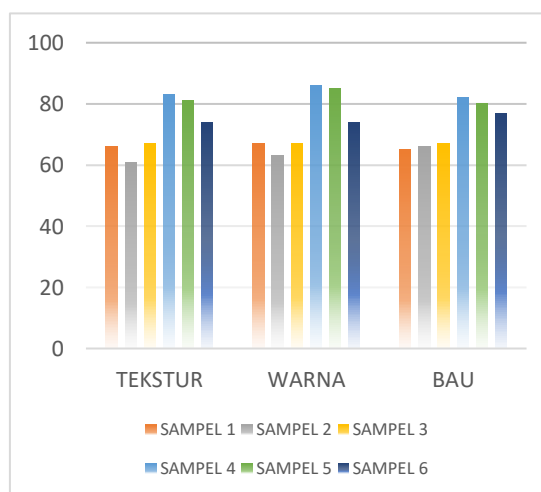
Based on the responses given by respondents for the six lip tint samples in terms of scent, it was found that Sample 4 achieved the highest total score compared to the other five samples, with a score of 82. When converted to preference levels according to Sugiyono (2010), this score falls into the "strongly like" category, while the other samples are in the "like" category.

4. Recapitulation of Hedonic Tests from Each Test Component

If presented in the form of a table and diagram, the scores of each sample based on the three criteria can be seen in the following table:

Table 4. Hedonic Test Recapitulation

PARAMETER	TOTAL SCORE OF EACH SAMPLE					
	SAMPEL 1	SAMPLE 2	SAMPLE 3	SAMPLE 4	SAMPLE 5	SAMPLE 6
TEXTURE	66	61	67	83	81	74
COLOR	67	63	67	86	85	74
ODOR	65	66	67	82	80	77
TOTAL SCORE	198	190	194	251	245	215



Gambar 1. Recapitulation Diagram of Hedonic Test

Conclusion

Based on the data analysis results from the hedonic testing of six lip tint brands as test samples, the following conclusions can be drawn:

1. Sample 4 received the highest total score from respondents across various testing criteria, including texture, color, and scent.
2. The score obtained by Sample 4 falls into the "strongly like" category, while the other five samples are in the "like" category.

For future research, it is recommended to expand the scope of all hedonic testing components, including the number of samples, the number of respondents, and testing on new formulas.

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