HEDONIC TEST OF ON FACIAL CARE CREAM PREPARATIONS OF SEVERAL BRANDS MARKETED IN BANDUNG AREAS

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Abstract

The hedonic test or favorability test is one of the tests used as, among others, as a benchmark for whether a product has good acceptability or not, so that it can be a reference for whether a product can be liked or not. The purpose of this study is how to conduct a hedonic test of products that have been circulating in the market where panelists were not previously informed about the brand of the product and placed in the same researcher packaging to avoid biases and impressions that have been attached to a particular brand, by using the descriptive study method by observation using as a tool in the form of a questionnaire filled out by the panelists after being given a sample and asked to respond to sensory responses to preparations in the range between 1 to 5, so that conclusion can be drawn from the three tested samples which sample got the highest score from 20 panelists. The results obtained from the three samples showed that sample 2 was the most selected sample and preferred by respondents from various test characteristics, both in terms of texture, color and odor.

Keywords: Hedonic Test, Facial care cream, questionnaire.

Introduction

Along with the development of cosmetic products that are in great demand, the production of cosmetic preparations which are widely circulating in the market is also developing, not only decorative cosmetics which are intended to improve one's appearance, skin care cosmetics are also not spared from the interest of modern society which is required to have a good appearance. not only more attractive but also healthier and more well-maintained skin conditions, so that the production of skin care cosmetics has developed and increased in number not only in types but also in increasing numbers to meet the needs and demands of these consumers, so that it has become a trend that continues to increase from year *to* year .

Care cosmetic products have achieved significant development in the last decade, along with increasing public awareness of skin health and appearance which is based on healthy skin. So that the market for skin care products floods the market with various types and various qualities.

It is undeniable that skin care products are currently the prima donna of the cosmetic product market, so that the relevant regulators, in this case BPOM as the only institution under the Ministry of Health which has authority in terms of supervising the circulation of medicinal, cosmetic and food preparations, need to to ensure the products circulating in the market have safety and effectiveness capable and accountable.

In addition to a safety aspect that can be accounted for, a cosmetic care product needs to have an attractive appearance starting from the packaging to the dosage form itself, starting from the organoleptic appearance, namely sensory or sensory assessment which includes color, smell and texture that can be felt on the skin, which is a one of the benchmarks for consumer acceptance of users of a cosmetic care product, so that it can compete in the market and become a product that is acceptable and has high selling power if it is marketed as a consumer product. For this reason, the evaluation used to assess how much acceptance from product users of a product is important as a basis for decision making in designing the right formula and can be well received by consumers.

Sensory testing (panel test) plays an important role in product development by minimizing risk in decision making. Panelists can identify sensory properties that will help to describe the product. Sensory evaluation can be used to

assess any desired or undesirable changes in product or formulation ingredients, identify areas for improvement, determine whether optimizations have been achieved, evaluate competing products, observe changes that occur during processing or storage, and provide the necessary data. for product promotion. Consumer acceptance and preferences, as well as the correlation between sensory and chemical or physical measurements, can also be obtained by sensory evaluation.

Assessment by the senses is also called Organoleptic Assessment or Sensory Assessment is a way of the most primitive assessment. Assessment by the senses becomes a field of science after the assessment procedures are standardized, rationalized, connected with objective assessments, data analysis becomes more systematic, as well as statistical methods used in analysis and decision making. Organoleptic assessment is very widely used to assess quality in the food industry and other agricultural product industries. Sometimes these assessments can result in very thorough judgments. In some respects the judgment of the senses surpasses even the most sensitive instruments.

Organoleptic assessment, which is also called sensory assessment or sensory assessment, is a method of assessment that has been known for a long time and is still very commonly used. This assessment method is widely used because it can be implemented quickly and directly. In some cases sensory assessment even has better accuracy than the most sensitive measuring instruments (Meilgaard *et al,* 2016). The application of organoleptic assessment in practice is called an organoleptic test which is carried out with certain procedures. This test will produce data for further analysis using statistical methods (Kartika, 1992).

Organoleptic test is a way of measuring, assessing or testing the quality of a commodity by using the sensitivity of the human senses, namely the eyes, nose, mouth and fingertips. Organoleptic tests are also called subjective measurements based on human subjective responses as a measuring tool (Soekarto, 1990). Organoleptic assessment is very widely used to assess quality in the food industry and other agricultural product industries. These assessments can sometimes give the result of a very thorough assessment. Assessment by the senses in some ways even exceeds the accuracy of the most sensitive tools, one of which is the hedonic (liking) test. The preference test is basically a test in which the panelists express a response in the form of whether they like or not the properties of the material being tested.

The preference test is also called the hedonic test. Panelists were asked for their personal responses about their likes or dislikes. In addition, the panelists also expressed their level of preference. These levels of preference are called hedonic scales. For example, in terms of "likes" it can have a hedonic scale such as: very very like, really like, like, rather like. Conversely, if the response "dislikes" can have a hedonic scale such as likes and rather likes, there is a response that is referred to as neutral, that is, neither likes nor dislikes (neither like *nor dislike*).

The hedonic scale can be stretched or collapsed according to the scale range it wants. The hedonic scale can also be changed to a numerical scale with quality scores according to the level of preference. With this numerical data statistical analysis can be carried out. The use of the hedonic scale in practice can be used to determine differences. So the hedonic test is often used to assess organoleptic to similar commodities or product development. The hedonic test is widely used to assess the final product.

So that in this study a problem was raised regarding how to carry out an example of carrying out a test on patient/consumer acceptance which is referred to as the "Hedonic Test", because the test is one of the important aspects that cannot be ignored, especially in the production of a consumer product, which in terms of This is a skin care cosmetic product.

Research Method

This research is an observational study that uses a descriptive study, by taking the research location area in the city of Bandung, where the questionnaire is given to panelists who have determined the intrinsic and extrinsic criteria for facial cream samples.

Tools and materials

Equipment used in research this is filled-in questionnaire as a research tool and sample, where the sample used in this study was facial care cream representing three categories of price levels , namely one sample with a price below IDR

50,000.00 to represent a relatively cheap price, one samples with a price range between IDR 50,000.00 - IDR 250,000.00 which represents medium prices and one sample from prices above IDR 250,000.00 to represent relatively expensive prices, samples were obtained from online markets or online shops in the Bandung city area . Researchers select samples that are most in demand or purchased by consumers that can be traced based on the ratings listed on the online store that provides the product.

Panelist preparation _

Panelists who participated in this study were 20 panelists with the following intrinsic and extrinsic criteria:

- Intrinsic criteria: women, aged 20-50 years, able to communicate well, willing to take hedonic tests and fill out questionnaires, and have sensory sensitivity of the five senses.
- Extrinsic criteria: has limitations in responding to sensory five senses.

Sample Serving Method

samples must be presented randomly and coded. In giving an assessment, the writer may not repeat the assessment or compare the examples presented. So for an untrained panelist, it is better if the samples are presented one by one so that the panelists will not compare one sample with another.

Rating method

Assessment of the hedonic test must be carried out spontaneously. Then the panelists can fill out the questionnaire . In this case, an acceptance test was carried out by the panelists for cream from 3 types of brands and the assessment was carried out at 5 levels of preference. Then proceed with the hedonic test .

Observation Table

Panelist Name   :
Sample Type   :   Cream
Number of Samples   :   3
Date . Testing   :
Instructions   :   Test samples from left to right, finish testing and assessing each sample thoroughly then neutralize your sight and smell for 1 minute. Then continue for other samples up to sample 3.

Hedonic/Like Test

Give an assessment based on the following scale:
        1 = Really Dislike
        2 = Dislike
        3 = Normal/Neutral
        4 = Like
        5 = Really Like

Sample Code	Assessment criteria		
	Texture	Color	Odor

Research variable

The variable used is a single variable, namely the level of preference for cream cosmetic preparations for the texture, color and smell of facial care creams from 3 brands circulating in the Bandung City market.

Data analysis technique

Data analysis used by researchers is descriptive quantitative data analysis, which is based on a Likert scale where the highest score is calculated divided by the maximum score of each indicator.
Data analysis activities include

1. Scoring

Scoring, namely giving a value in the form of a number to the answer to a question to obtain quantitative data. In this study, the score given was based on the level of answers received from the respondents, namely;

    a.   Really like score 5
    b.   Like 4
    c.   Simply like a score of 3
    d.   Dislike score 2
    e.   Dislike score 1

2. Tabulating

Tabulating, namely grouping the answers regularly and carefully, then counting and summing up in tabular form.

Analysis of Respondents' Liked Level Measurement

The respondent's preference level was measured by calculating the percentage of each question indicator (texture, smell, and color). Using the Sugiyono Formula, 2010.

$$\% = \frac{total\ score\ acquisition}{maximum\ total\ score}\ X\ 100\%$$

The range of respondents' preference level scale

    1.   Really Like   81-100 %
    2.   Like   61-80 %
    3.   Enough Like   41-60 %
    4.   Less Like   21-40 %
    5.   Dislike   0-20 %

Results and Discussion

Based on the results of hedonic testing on samples of facial care cream preparations, the following results were obtained:

    1.   Hedonic test of cream preparation texture

Hedonic testing or assessment of the texture of skin care cream preparations done with method do observation in a manner direct on the three preparations as test samples . Level favorite Which tall represent texture view Which most preferred by respondents , which can be observed in Table 1.

Table 1. Hedonic Test on the Texture of Cream Preparations

HEDONIC ASSESSMENT OF TEXTURE			
Panelists	Sample 1	Sample 2	Sample 3
P1	2	5	2

P2	4	5	2
P3	5	5	3
P4	2	5	2
P5	2	2	5
P6	3	4	2
P7	2	4	4
P8	3	5	4
P9	3	4	3
P10	5	4	4
P11	2	5	3
P12	3	4	3
P13	4	5	2
P14	2	4	2
P15	2	4	2
P16	2	4	3
P17	3	5	3
P18	3	5	5
P19	2	5	2
P20	2	5	2

Description: P = Panelists
Levels of pleasure
1 = Really Dislike
2 = Dislike
3 = Normal/Neutral
4 = Like
5 = Really Like

From the responses given by respondents to the three cream samples based on the texture of the preparation, it was found that sample 2 received the highest total score compared to the other two samples, namely 89 which, if converted to a preference level according to Sugiyono, 2010, is in the very like range, while for samples 1 and 3 garnered scores of 56 and 58 respectively which are both in the moderately like range.

2.   Hedonic Test on the color of the cream preparation

Hedonic testing or assessment of the color of skin care cream preparations done with method do observation in a manner direct on the three preparations as test samples. Level favorite Which tall represent color display Which most preferred by respondents, which can be observed in Table 2.

Table 2. Hedonic Test on the Color of Cream Preparations

HEDONIC ASSESSMENT OF COLOR			
Panelists	Sample 1	Sample 2	Sample 3
P1	3	5	
P2	4	3	2
P3	4	3	2
P4	5	5	3

P5	5	5	3
P6	5	4	3
P7	2	5	4
P8	3	5	4
P9	3	5	5
P10	4	5	2
P11	5	3	3
P12	5	3	3
P13	3	4	4
P14	3	5	4
P15	3	5	4
P16	4	5	5
P17	3	5	2
P18	4	0	2
P19	4	4	3
P20	3	5	3
			3

Description: P = Panelists
Favorite level 1 = Strongly Dislike
2 = Dislike
3 = Normal/Neutral
 4 = Like
 5 = Really Like

From the responses given by respondents to the three cream samples based on the color of the preparation, it was found that sample 2 received the highest total score compared to the other two samples, namely 84 which, if converted to a preference level according to Sugiyono, 2010, is in the very like range, while for samples 1 and 3 garnered scores of 75 and 64 respectively which are both within the likes range.

1. Hedonic Test for Odor of Cream Preparation

Hedonic testing or assessment of the smell of skin care cream preparations done with method do observation in a manner direct on the three preparations as test samples . Level favorite Which tall represent smelly look _ most preferred by respondents , which can be observed in Table 3.

Table 3. Hedonic Test for Smell of Cream Preparations

HEDONIC ASSESSMENT OF ODOR			
Panelists	Sample 1	Sample 2	Sample 3
P1	4	5	3
P2	3	4	2
P3	3	3	2
P4	2	3	2
P5	2	5	3
P6	5	5	3
P7	5	3	4

P8	5	4	4
P9	5	4	3
P10	4	5	3
P11	4	4	5
P12	4	5	5
P13	3	5	2
P14	3	4	3
P15	4	5	4
P16	5	3	5
P17	2	5	2
P18	3	5	2
P19	3	3	3
P20	4	5	4

Description: P = Panelists
Favorite level 1 = Strongly Dislike
2 = Dislike
3 = Normal/Neutral
4 = Like
5 = Really Like

From the responses given by respondents to the three cream samples based on the smell of the preparation, it was found that sample 2 received the highest total score compared to the other two samples, namely 85 which, if converted to a preference level according to Sugiyono, 2010, is in the very like range, while for samples 1 and 3 garnered scores of 73 and 64 respectively which are both within the likes range.

4.   Recapitulation of the Hedonic Test for Each Test Component

If presented in the form of tables and diagrams, the results of each sample based on the three criteria are as follows:

Table 4. Hedonic Test Recapitulation
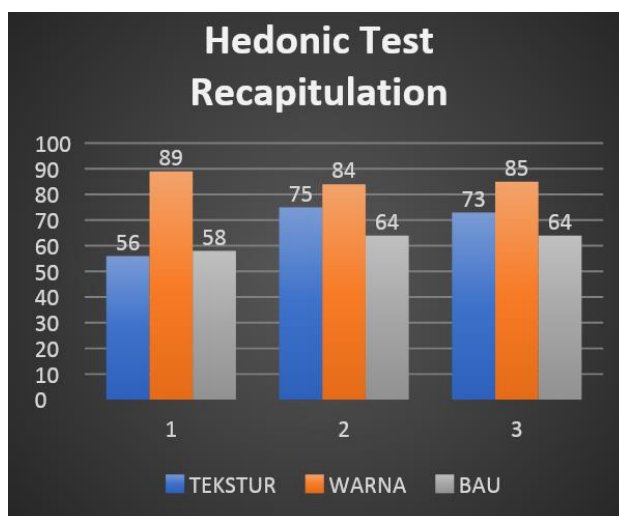
TEST CRITERIA	TOTAL SCORING		
	SAMPLE 1	SAMPLE 2	SAMPLE 3
TEXTURE	56	75	73
COLOR	89	84	85
ODOR	58	64	64

Figure 1 Hedonic Test Recapitulation Diagram

Conclusions and Recommendations

Conclusion

Based on the results of data analysis obtained from hedonic testing of 3 brands of cream preparations as test samples, the following conclusions can be drawn:

1. Sample 2 is the most chosen sample and preferred by respondents as a cream preparation from various test characteristics, both in terms of texture, color and smell.
2. The total score of each criterion shows that sample 2 is in the Strongly Like range.

Suggestion

For further research it is recommended to add all the components of this hedonic test, both in terms of the number of samples, the number of volunteers and also the testing carried out on the new formula.

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