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Feasibility of Cornstrarch Masks for Dry Facial Skin Care

Mely Suryani
Fakultas Pariwisata dan Perhotelan
Universitas Negeri Padang, Indonesia
Prima Minerva
Fakultas Pariwisata dan Perhotelan
Universitas Negeri Padang, Indonesia

Email:
prima.minerva@fpp.unp.ac.id

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Abstract
This study is based on the problem of dry facial skin that causes a person's lack of self-confidence due to complaints of dark spots, dull, scaly skin, and fine wrinkles on the face. Corn is one of the vegetables that can be used as an ingredient for traditional skin beauty treatments and contains vitamin E which is beneficial for dry skin. The purpose of this study is to analyze the feasibility of cornmeal masks in terms of laboratory tests, organoleptic tests, hedonic tests This research method is an experiment and a type of quantitative descriptive research of cornmeal masks. Data collection methods in the form of observation, documentation, and questionnaires Research instruments are laboratory tests, organoleptic tests, hedonic tests and identification tests. The collected data is processed using a percentage descriptive analysis formula. The results of laboratory test studies are Vitamin A contained in cornmeal masks, namely 82 mg / 100gr, Vitamin B1 contained in cornmeal masks 5.5 mg / 100gr and Vitamin C contained in cornmeal masks 7.92 gr / 100gr. The results of the texture organoleptic test found that 86% of the panelists said the texture of cornmeal was very smooth, 100% of the panelists said the aroma of the cornmeal mask had a strong aroma typical of corn, 71% of the panelists said the stickiness of the cornmeal mask was quite close to the results of the hedonic test the panelists' likeness could be shown that 100% of the panelists liked the cornstarch mask. Flour Cornstarch masks have the feasibility for this to be used as a natural mask for treatment.

Keywords: *corn, feasibility, mask, dry face*

Introduction

Beauty is something that is highly coveted by most women, but due to the erratic weather and activities outside or indoors cause many problems with the skin. The skin is the outermost layer of the body cover which has a key as a protector of body organs from the sun and others. The skin is one of the most important tools of the human body and is located at the outermost. The appearance of the skin will be a concern for a person. To show a good appearance, it is necessary to keep the skin clean and beautify or beautify (Tranggono, 2007:4).

Muliyawan (2013: 141) explained that skin types are grouped into several types: Skin is divided into several types, namely dry skin, normal skin and oily skin. This division is based on the water and oil content present on the skin. (1) Dry skin is skin with less or low moisture content. (2) Normal skin is skin that has high water content and low to normal oil content. (3) combination skin, namely the middle area of the facial skin or known as the T area (forehead, nose and chin) sometimes oily or normal on other parts of the skin tends to be more normal and even dry. Of the skin types described above, dry skin types are one of the problems that are often experienced by women. Many women who have dry skin complain about their visible skin because it looks dull, flaky, black in stroke, as well as the onset of fine wrinkles and when using powder cosmetics it is difficult to stick to the face, resulting in a lack of self-esteem (Muliyawan 2013: 14).

Corn that is processed into flour still has nutritional content in the form of protein, fat, carbohydrates, calcium, phosphorus, iron, etc. Protein can help maintain skin elasticity and prevent wrinkles from appearing on the skin and cornstarch also has a high enough water content so that it can be used to treat dry skin. In cornmeal there is corn starch which is able to absorb water and retain water and corn flour also has the ability to bind water and oil. There for cornstarch can be used as an ingredient capable of moisturizing the skin. The use of cornmeal masks has not been widely used by the public for dry facial skin care (Atika, 2019: 71). One of the natural treatments is using corn masks, the properties and content contained in corn are not known to most people and in the market, no one has sold mask products from corn.

Corn is the main ingredient that is easy to get and the price is relatively cheap. Traditional cornmeal masks can be used as naturally based facial skin care cosmetics and contain Vitamin A which can help repair damaged tissues, reduce wrinkles and problems on dry facial skin, contain Vitamin B1 as an antioxidant and maintain the beauty and health of facial skin, Vitamin C content can moisturize the skin, maintain skin suppleness, and brighten the skin on the face when used as a face mask (Khansa, M. 2019). Given the efficacy of corn, researchers want to use corn tepug as an ingredient for making masks which are seen from the feasibility through laboratory tests, identification and confirmation tests, organoleptic tests (texture, aroma, and adhesion) and hedonic tests (panelists' preferences).

Literature Review

Dry skin has a very low oil or sebum content and tends to be sensitive, so it looks drybecause the skin is unable to retain its moisture. Dry skin types emit less oil than other skin types, therefore make it a habit to wear sunscreens or moisturizers that contain sunscreens and antioxidant substances, especially if doing activities outside the home. Dry skin care can also be done regularly, namely every day and periodically. Daily dry skin care includes cleansing creams containing emollients to

prevent dehydration and using moisturizers. (Yudha Pernama, 2018 . Masks are ingredients, cosmetics that are used at the end of facial / body skin care, after a complete cleaning massage then the face except eyebrows, eyes and lips are wrapped like a mask (Rostamailis, 2005).

Natural masks are masks made from natural ingredients such as vegetables and fruits and traditionally processed. Natural ingredients that can be used as mask ingredients are vegetables, fruits, havermout, eggs and honey but choose ingredients both vegetables and fruits that are of good quality, really ripe and fresh for milk, eggs, honey and havermout can be chosen that are still fresh and haveared (Kusantati, et al. 2008: 227). In young sweet corn, there is a content of vitamins that are beneficial for the health and beauty of the skin besides that the ingredients are easy to get and easy to grow in Indonesia. The nutrients contained in young sweet corn consist of carbohydrates, proteins, fats, vitamins and minerals (Phallus, 2010).

Method

This research uses an experimental type of research according to Sugiono (2008: 107). The experimental research in this study aims to determine the content of vitamin A, vitamin B1, and vitamin C, which are contained in traditional corn masks and to determine the feasibility of traditional corn masks from the texture, aroma, adhesion and preferences of the panelists. The object of this study is young sweet corn made into a natural mask powder for facial skin care. The research variable is the free variable (X) in this study is the traditional mask of cornmeal. The bound variables (Y) in this study were the content contained in traditional cornmeal masks and organoleptic properties including texture, aroma, adhesion, and panelists' preferences. Data collection techniques use observation methods, documentation a questionnaire. Data analysis techniques use descriptive analysis techniques of labor tests, organoleptic tests and hedonic tests.

Result and Discussion

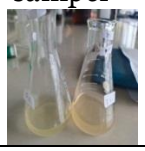
Description of Research Results

1. Laboratory Test Results

   Corn samples were taken from the plantation of the Dadok area of the black stump, Koto Tangah District, Padang City, West Sumatra, and in an identification and confirmation test conducted at the hebarium of Andalas University majoring in biology FMIPA UNAND. The identification results found that corn belongs to the Poaceae family and the species Zaea mays L. cornmeal masks were tested in the laboratory with the aim of determining the content of Vitamin A, Vitamin C and Vitamin B1 in cornmeal masks.

The results obtained from such laboratory tests are as follows:

Table 1. Content of Vitamin A, Vitamin C, and Vitamin B1 Cornmeal Mask

No	Parameters	Analysis Results	Unit	Method
1.	Vitamin A Levels	0,82 %	mg/100gr sampel 	Spektrofoto meter
2.	Vitamin C Levels	7,92 %	mg/100gr sampel 	Titrasi lodometri
3.	Vitamin B1 levels	0,055 %	mg/100gr sampel 	Spektrofoto meter

Based on the table above, you can see the content of vitamin A, vitamin C and vitamin B1 from cornmeal masks. Vitamin A contained in cornmeal masks is 82 mg / 100gr, vitamin C contained in cornmeal masks 0.792 gr / 100gr and Vitamin B1which is contained in cornmeal masks 5.5 mg / 100gr.

Vitamin C serves to maintain collagen, which can maintain suppleness, flexibility, as well as smoothness of the skin and brighten the skin. Vitamin C contributes to skin fibroblasts that play a role in the production of collagen and maintain the balance of collagen and elastin in the layers of the dermis. Vitamin A is often used in anti-aging facial care cosmetics. plays a role in maintaining skin health and keeping the skin firm and elastic so that it is able to prevent premature aging and improve the rough and wrinkled surface of the facial skin. Vitamin A can have antioxidant activity so that it can protect cells from radicals such as peroxyl radicals and singlet oxygen. (Minerva & Hefni, 2022).

2. Organoleptic Test Results
   a. Texture Organoleptic Test Results

Table 2. Texture Organoleptic Test

No	Score	Frequency	Account	Percentage
1.	1	0	(0/7)*100	-
2.	2	1	(1/7)*100	14%
3.	3	6	(6/7)*100	86%
4.	4	0	(0/7)*100	-

Based on the table above, it can be shown that 86% of panelists say the texture of cornmeal is smooth and 14% of panelists say the texture of cornmeal is less smooth.

b. Aroma Organoleptic Test Results

Table 3. Aroma Organoleptic Test

No	Score	Frequency	Account	Percentage
1.	1	0	(0/7)*100	-
2.	2	0	(0/7)*100	-
3.	3	7	(7/7)*100	100%
4.	4	0	(0/7)*100	-

Based on the table above, it can be shown that 100% of the panelists said the aroma of the cornmeal mask has a strong aroma typical of corn.

c. Results of the Adhesion Organoleptic Test

Table 4. Adhesion Organoleptic Test

No	Score	Frequency	Account	Percentage
1.	1	0	(0/7)*100	-
2.	2	2	(2/7)*100	29%
3.	3	5	(5/7)*100	71%
4.	4	0	(0/7)*100	-

Based on the table above, it can be shown that 71% of the panelists said the adhesion of cornmeal masks is quite close, and 29% of panelists said that the adhesion of cornmeal is less close.

3. Panelist's Favorite Hedonic Test Results

Table 5. Panelist's Favorite Hedonic Test

No	Score	Frequency	Account	Percentage
1.	1	0	(0/7)*100	-
2.	2	0	(0/7)*100	-
3.	3	7	(7/7)*100	100%
4.	4	0	(0/7)*100	-

Based on the table above, it can be shown that 100% of the panelists like cornmeal masks.

Conclusion

The process of making corn masks in this study was made in the form of cornmeal powder starting with the preparation of tools and materials to be used, choosing fresh yellow corn, peeling corn husks and then washing corn with running water then sliced, placing the sliced corn on a baking sheet, after that dry it using direct sunlight for 3-4 days in a period of up to ±7-8 hours, after drying the corn puree

using a blender, after fine strain the corns to separate the coarse ones from the fine ones. From 1 kg of fresh corn, after going through the process of making corn into cornmeal, it produces 100 g of cornmeal powder to be used as a traditional mask.

The feasibility of corn masks based on the results of laboratory tests can be seen that the vitamin A contained in cornmeal masks is 82 mg / 100gr, Vitamin C contained in cornmeal masks as much as 7.92 gr / 100gr and Vitamin B1 contained in corn flour masks as much as 5.5 mg / 100gr.

The feasibility of corn masks based on the table of texture organoleptic test results can be shown that 86% of panelists said the texture of cornmeal is very smooth,100% of panelists said the aroma of cornmeal masks has a strong aroma typical of cornmeal and 71% of panelists said the adhesion of cornmeal masks is quite close to durability for 15 minutes. Based on the table of the results of the hedonic test of the panelists' likeness, it can be shown that 100% of the panelists like cornmeal masks. Based on organoleptic and hedonic tests, it shows that the texture, aroma, adhesion, and preferences of cornmeal panelists have the feasibility to be used as a natural mask for facial skin care.

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