



Feasibility of Papaya Seeds and Rice Flour as Traditional Scrubs for Dry Skin

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Abstract

This research was backgrounded by a bath of papaya seeds with the addition of rice flour as one of the basic ingredients of traditional cosmetics as a scrub for dry skin. This study aims to a) To analyze the feasibility of rice flour and papaya seeds as traditional scrubs for nurses, the feasibility of rice flour and papaya seeds will be achieved as traditional scrubs for body care based on organoleptic tests, b) to analyze how the feasibility of rice flour and papaya seeds as traditional scrubs for body care based on organoleptic tests, c) to analyze the feasibility of rice flour and papaya seeds as traditional scrubs for body care based on favorability test. This research uses a quantitative approach to the type of pre-experiment method. The places and time of the study was conducted at the FMIPA Laboratory and Cosmetology and Beauty Laboratory of FPP UNP in January 2022. The variables in this study are free variables (x) and bound variables (y). Data collection techniques use observation and documentation with descriptive analysis techniques that display frequency and percentage. Based on the results of the study obtained in seeds per 100 gr of Vitamin B1 by 0.0004% and Tannins by 0.0031%. Judging from the results of organoleptic tests, it showed that 43% of the panelists stated a rough texture, 57% of the panelists stated that the aroma of papaya seed scrub and rice flour was strongly scented, and 71% of the panelists stated that the stickiness of papaya seed scrub was sticky and based on the panelists' preferences showed that 85% of the panelists stated that they liked papaya seed scrub and rice flour. It is suggested that you can apply the results of this study as a science to increase knowledge about traditional scrubs for skin care.

Keywords: *Feasibility, Papaya Seeds and Rice Flour, Scrub*

Introduction

Healthy skin is skin that does not have a skin disorder. According to Rahmawaty (2020: 5) the skin is the outermost part of the body that covers almost all parts of the body. Therefore, the importance of taking care of the skin of the body so that the skin condition remains healthy and fresh, this is in line with the opinion of Syawaliyah (2020: 1) The skin needs nutrients to stay moist and maintain its health. Rostamailis and Rahmiati (2015:79) skin function is actually much more complicated than just coating as a mere beauty factor. The skin not only plays an important role to help the processes in the body, but also plays the role of a protector from external disorders for it is necessary to carry out body care.

Dry skin is a problematic skin type, dry skin loss or reduced moisture levels on the skin, skin conditions such as dry skin must take care according to the skin condition. Minerva (2019), dry skin if not treated will easily develop wrinkles caused by decreased skin elasticity. Dry skin is caused by the lack of oil production from the kelenjer which results in a tendency to premature aging and prone to wrinkles. Dry skin is skin with a less or low moisture content (Muliyawan 2013:141). To overcome this, treatments can be carried out and use cosmetics that are suitable for the skin type, in the hope of caring for the skin or maintaining the skin condition in a healthy form, keeping the skin healthy, many things can be done such as treatments from the outside and treatments from the inside.

External treatment can be done in various ways such as providing protection before leaving the house such as sunblok, skin care can be done by doing regular maintenance. Skin care is to take care of external care whether done every day or done for a certain period of time (Hayatunnufus 2009:3). Meanwhile, according to kusantati (2008: 337) body skin care can be done (1) daily, (2) weekly and (3) periodically.

According to Tranggono (2007) explained Cosmetics are ingredients that are ready to be used on the outside of the body that are ready to be used on the outside of the body (epidermis, nails and external genital organs) to clean. add to the attractiveness, change the appearance, protect to stay in good condition, improve body odor but are not intended to treat or cure a disease. Cosmetics are classified with several manufactures according to Rostamailis (2005:14-15) in Fauziah Safitri (2014:2) cosmetics consist of 3 groups according to the basic guidelines of their management, namely: (1) traditional cosmetics (2) semi-traditional cosmetics (3) modern cosmetics. Cosmetics are very influential in maintaining and caring for the skin to maintain skin elasticity, one of which is using traditional cosmetics. According to Ekel (1991:76) explains that traditional cosmetics can be made by ourselves, directly from fresh ingredients or plants around us. Traditional cosmetics are processed with recipes and their way of making that are hereditary from ancestors.

According to Rostamailis (2005) body care is a science that studies how to treat body parts, so that these parts do not experience fatal changes or damage the appearance. Skincare requires special care so that the skin looks brighter, healthier and fresher. Scrub is the right type of treatment chosen to help remove dead skin cells because it has fine grains in it. Scrubs are cosmetics to treat and cleanse the skin of dirt and dead skin cells. Scrubbing is an activity to remove dirt, oil or dead skin cells which is done by massage throughout the body. The result can be seen immediately to look smoother, firmer, smooth oil tight and radiant (fauzi, et al (2012) in Fauziah safitri (2014:3). In addition, according to Darwati (2013) scrubs

also have various substances that can provide different benefits to the skin such as brightening, smoothing, softening, whitening the skin. The scrub products needed are those that contain substances that can help maintain skin moisture, prevent the skin from aging prematurely, and have a highwater content.

Problems found in the skin can be overcome with natural and modern treatments. Natural care is a treatment that uses traditional ingredients, which is made from natural ingredients and processed according to recipes and manufacturing methods that are hereditary. So in this discussion, researchers are interested in researching the problem of dry skin, using natural ingredients traditionally. Based on observations and interviews that researchers conducted on June 30, 2021, located in the department of cosmetology and beauty, researchers found 5 people who experienced dry skin problems, skin looked dull, stiff, wrinkled easily, scaly, and not fresh. one of the traditional cosmetics that can solve problems on the skin is scrubs.

Natural ingredients traditionally in the form of scrubs are cosmetics that are used to treat and cleanse the skin of dirt and dead skin cells. Fauzi and Nurmalina in Indratmoko (2017:19) scrubs from natural ingredients contain traditional cosmetics that are processed traditionally. Scrubs are activities to remove dirt, oil, or dead skin that is done by massage throughout the body. The result can be immediately visible, the skin is smoother, firmer, fragrant and healthy glowing. Traditional cosmetics are cosmetics that consist of natural ingredients and are traditionally processed. The benefits of using traditional cosmetics are that they can feel naturally the sensation of traditional ingredients that are safe for the body and health, especially on the skin. According to nurmala, et al (2019: 1) one of the ways to treat dry skin naturally is to use scrubs. Astuti, et al (2015), scrubs can be used against dry skin types by doing the treatment gradually either once a week or once a month depending on the condition of each skin. Rahmiati, et al (2013), the benefits of skin scrubs become clean and healthy. Traditional scrub is one of the cosmetic preparations made from fresh natural ingredients or ingredients that have been dried from plants and fruits.

By utilizing the materials that are around, scrubs can also be made from natural materials. Papaya seeds are part of the papaya fruit that is not eaten, one of the traditional cosmetics of scrubs is papaya seeds and rice flour can be used as a scrub. Papaya seeds are rich in benefits for the skin. According to nurmala, et al (2019:2) papaya seeds contain the enzyme papain which can prevent wrinkles, shrink skin pores, and spread skin. Papaya seeds contain more than 24 proteins and can be easily digested. These seeds contain 32 carbohydrates and 25 oils including some essens oil. Papaya seeds have quite a lot of benefits for health, namely worms, palpitations, hypotheses, in skin care products and cosmetics (Nurain, 2011: 209).

According to Nirmala in Melanti and Dwiyaniti (2017:9) suggests that rice flour is very efficacious, containing amylose, amylopectin, hydralized amyllum / dextrin and kojik acid which can whiten the skin as a result of fermentation of amyllum during soaking. Therefore, rice flour is used for one of the ingredients for making scrubs, because it is efficacious in moisturizing the skin to make the skin smooth, and brighten the skin, and has a function as an anti-oxidant. In addition, rice flour functions as an adhesive, so that when the scrub is applied, it can stick and remove dead skin cells.

Based on the description of the material obtained, the feasibility of a product is contained in the criteria for determining whether it is feasible to make it based on the

texture contained in the quality of the surface of a scrub product and the stickiness of the skin when used. According to Ramahana, N (2015:96) many of the substances in papaya seeds include their content: alkaloids, vitaminB1, steroids, tannins, and also essential oils. In detail, the content of the seed is in the form of unsaturated fatty acids in high quantities.

By combining the two ingredients as a traditional scrub for the skin, the content of each ingredient will work well. One of the ingredients in rice flour is that it contains amylose, amylopectin, hydralized amyllum / dextrin and kojik acid which can whiten the skin. One of the ingredients in papaya seeds is the enzyme papain. This enzyme has benefits for the skin, one of which is that it can dissolve dead skin cells that are attached to the skin and are difficult to exfoliate. In addition, the fine grains of papaya seeds after forming powder can also be used as scrubs in traditional scrubs, Meliani (2016: 3). Based on the background above, furthermore, researchers are interested in conducting a study, namely "the feasibility of Papaya Seeds and Rice Flour as Traditional Scrubs for Dry Skin".

Literature Review

As a woman, maintaining beauty and caring for skin health is very important, because if it is not maintained, it will cause problems on the skin. The skin is the outermost layer that wraps around the whole body and protects the tools of the inner body. Hakim, et al (1998:245) explained that the skin is the outermost human organ that covers the entire human body. Rahmiati, et al (2013:6) also state that the skin is the outermost layer that wraps around the whole body and protects the tools of the inner body. Dry skin is a problem for many people and often leads to insecurity. Dry skin is smooth skin, rapu. The skin part is less flexible. Pores are not clearly visible due to lack of oil production and oil sebaceous (Tilaar 2012:15). As a result of the skin lacking oil, the skin texture becomes not fresh, the skin looks dull and flaky.

Meanwhile, according to Rostamailis (2005: 43) explained that it has characteristics as follows: a) the skin looks very dry, b) the skin of the face is thin, very sensitive, rapidly becoming premature aging and wrinkles. Rostamailis (2015:16) explains that skin care is divided into two types: (1) Skin care using traditional ingredients, (2) skin care with modren ingredients. Traditional treatment means, the treatment of the use of natural ingredients whose process is carried out in a modern way is to use cosmetic preparations made from chemicals that have been packaged in the form of prodak with modern / sophisticated tools and explain the use of modren ingredients has side effects / risks if not careful in their use or storage.

Cosmetics are ingredients that add ingredients that are applied to the outer limbs such as the epidermis, skin, hair, teeth and so on with the aim of adding attractiveness, protecting, improving skin condition (Mulyawan 2013: 2). Scrubs are one of the traditional types of cosmetics for body skin made from a wide variety of natural ingredients that are processed into scrubs and used to remove coarse dead skin cells. Scrub is a liquid or semi-solid dosage form in the form of emulation to remove dead skin cell impurities that are not completely lifted by soap and provide moisture and restore skin softness (Amirudin 2013 in Fauziah 2014: 23). Meanwhile, according to (Faauzi, et al 2012) Scrub is an activity to remove dirt, oil or dead skin by massage throughout the body and produces firm and healthy skin (Fauzi, et al 2012).

Lubis, A (2015:8) papaya seeds also contain chemical compounds such as: compound fat 25%, fat 26%, protein 24.3%, 17% fiber, water 8.2%. According to Ramadhana, N (2015:96) many of the substances in papaya seeds include their content: alkaloids, vitamin B1, steroids, tannins, and also essential oils. In detail, the content of such seeds is in the form of several unsaturated fatty acids in high quantities. According to Nirmala in Melanti & Dwiyantri (2017: 9) suggests that rice flour is very efficacious, containing amylose, amylopectin, hydralized amylum/ dextrin and kojik acid which can whiten the skin as a result of fermentation of amylum during soaking.

Method

The type of research used is a qualitative approach using the experiment method. Data collection techniques are in the form of observation, documentation, and using questionnaires as research instruments. The research was conducted at the laboratory FMIPA UNP and the department of cosmetology and beauty. Data analysis techniques use labor tests, organoleptic tests and hedonic tests. The sample from this study was 2 lecturers of cosmetology and beauty, 1 person from pharmacy, 1 beauty doctor and 3 female students majoring in cosmetology and beauty.

Result and Discussion

Description of Research Results

1. Laboratory Test Results

Samples of papaya seed scrubs and rice flour were tested in the Chemical laboratory of FMIPA UNP with the aim of determining the content of Vitamin B1 and Tannins in papaya seed scrubs and rice flour. The results obtained from such laboratory tests are as follows:

Table: 1. Content of Vitamin B1 and Tannins Of Papaya Seed Scrub and Rice

NO	Parameters	Analysis Result			Method
1	Vitamin B1	0.0004 % (dalam sampel)	100	gram	Spektrofotometer UV-Vis
2	Tanin	0.0031% (dalam sampel)	100	gram	Spektrofotometer UV-Vis

Based on the table above, it can be seen that there is a content of Vitamin B1 and Tannins in papaya seed scrubs and rice flour. Vitamin B1 contained in papaya seed scrubs is 0.0004%/100gr and Tannins are 0.003% /100 gr.

2. Organoleptic and Hedonic Test Results

In this study, papaya seed scrubs and rice flour were assessed by 7 panelists consisting of 2 lecturers of Cosmetology and Beauty, Padang State University, 1 person from the field of cosmetology and randomness pharmacy experts, 1 person from industry and 3 people from Cosmetology and Beauty students.

From the 7 panelists, the following results were obtained:

Table: 2. Organoleptic and Hedonic Test Results of papaya seed scrub and rice flour

No Panelists	Panelist Work	Organoleptic Test and Hedonic Test of papaya seed scrub and rice flour			
		Texture	Aroma	Stickiness	Panelists' Favorites
1	Lecturer	2	3	3	3
2	Lecturer	1	2	3	3
3	Pharmacy	3	3	3	3
4	Industry	1	4	2	3
5	Student	3	3	4	3
6	Student	4	2	3	3
7	Student	3	3	3	4

a. Texture Organoleptic Test Results

Table: 3. Texture Organoleptic Test Results

No	Assessment Indicators	Score	Frequency	Account	Percentage
1	Not Rough or Smooth	1	2	(2/7)*100	28 %
2	Less rude	2	1	(1/7)*100	14%
3	Rough	3	3	(3/7)*100	43%
4	Very rude	4	1	(1/7)*100	14%

Based on the results of the texture organoleptic test according to the table above, it can be shown that 14% of the panelists said that the texture of papaya seed scrub and rice flour was very rough, 43% of panelists said it was rough, 14% of panelists said it was less rough and 28% of panelists said it was not rough or smooth.

b. Aroma Organoleptic Test

Table 4: Aroma Organoleptic Test

No	Assessment Indicators	Score	Frequency	Account	Percentage
1	Unappearing	1	-	-	-
2	Less Strongly Scented	2	2	(2/7)*100	28%
3	Strongly scented	3	4	(4/7)*100	57%
4	Very Strongly Scented	4	1	(1/7)*100	14%

Based on the results of the texture organoleptic test according to the table above, it can be shown that 14% of the panelists said that the aroma of papaya seed scrub and rice flour is very strong, 57% of the

panelists said it is strongly flavored, 28% of the panelists said it is less strongly flavored, and 0% of the panelists said it is not flavorful.

c. Hedonic Test (Panelist's Favorability)

Table: 5. Hedonic Test (Panelist's Favorability)

No	Assessment Indicators	Score	Frequency	Account	Percentage
1	Dislike	1	-	-	-
2	Dislikes less	2	-	-	-
3	Like	3	6	(6/7)*100	85%
4	Really like	4	1	(1/7)*100	14%

Based on the hedonic test or the preferences of the panelists according to the table above, it can be shown that 14% of the panelists said they really like papaya seed scrub and rice flour, 85% of the panelists said they like it, 0% of the panelists said they don't like it and don't like papaya seed scrub and rice flour.

Discussions

The discussion of this study describes the process of making papaya seed scrubs and rice flour, the results of laboratory tests, namely testing the content of Vitamin B1 and Tannins contained in papaya seeds, organoleptic tests, namely texture, aroma, adhesion tests and hedonic tests, namely the panelists' preference for papaya seed scrubs.

1. Feasibility of papaya seed scrub and rice flour based on Laboratory Test Results

After conducting laboratory tests at the Chemical Laboratory of FMIPA UNP, it was found that the results of the vitamin content needed vitamin B1 of 0.4 mg in 100 grams of papaya seed powder. Vitamin B1 has a function to brighten facial skin and as an antioxidant that can protect the skin from free radicals, produce collagen so that it can improve skin texture (Elfita & Minerva, 2019). Bioactive compounds from plants are useful as antioxidants so that they can protect from free radicals. (Minerva & Hefni, 2022). According to Pappa, et al (2019: 93) Tannins are one of the active compounds of secondary metabolites that are known to have several properties as anti-bacterial and tannins have a phenol group so that tannins have properties such as alcohol, which is antiseptic.

2. The behavior of papaya seed scrub and rice flour based on organoleptic test results

Based on the results of organoleptic tests which include texture, aroma, and adhesion, the following results were obtained:

a. Texture Organoleptic Test

Of the 7 panelists consisting of 2 lecturers, 1 pharmacy person, 1 industry person, and 3 students, 14% of the panelists found that the papaya seed scrub and rice flour were very rough in texture, 43% of the panelists stated that they were rough, 14% of the panelists stated that they were less harsh, and 28% of the panelists said they were not rough or smooth.

b. Aroma Organoleptic Test

Of the 7 panelists consisting of 2 lecturers, 1 pharmacist, 1 industry person and 3 students, 14% of the panelists stated that the papaya seed scrub and rice flour had a very strong aroma, 57% of the panelists stated that it had a strong aroma, 28% of the panelists stated that it had a less strong scent and 0% of the panelists stated that it had no scent.

c. Adhesion Organoleptic Test

Of the 7 panelists consisting of 2 lecturers, 1 pharmacy person, 1 industry person and 3 students obtained the results of 14% of the panelists stated that the papaya seed scrub and rice flour said it was very sticky, 71% of the panelists stated that they were close, 28% of the panelists stated that they were less attached.

3. Feasibility of papaya seed scrub and rice flour based on hedonic test

Of the 7 panelists consisting of 2 lecturers, 1 pharmacy person, 1 industry person and 3 students obtained the results of 14% from the panelists stated that they really like papaya seed scrubs and rice flour and 85% of the panelists stated that they like papaya seed scrubs and rice flour.

Conclusion

Feasibility of Papaya Seeds and Rice Flour as Traditional Scrubs for dry skin seen from the results of laboratory tests carried out at the Chemical Laboratory of FMIPA UNP showed that papaya seeds contain Vitamin B1 by 0.0004% and Tannins by 0.0031%. The content of Vitamin B1 in papaya seed scrubs and rice flour also functions as an antioxidant that is useful for warding off free radicals and preventing premature aging and Tannins are one of the active compounds of secondary metabolites which are known to have several properties as anti-bacterial and tannins have a phenol group so that tannins have properties such as alcohol, which is antiseptic.

The feasibility of papaya seeds and rice flour as traditional scrubs for dry skin seen from the results of organoleptic tests showed that 43% of panelists stated a rough texture, 57% of panelists stated that the aroma of papaya seed scrub and rice flour was strongly scented, and 71% of panelists stated the stickiness of papaya seed scrubs to be sticky. The feasibility of papaya seeds and rice flour judging from the results of the hedonic test of the panelist's favorability level showed that 85% of the panelists expressed their liking for papaya seed scrubs and rice flour.

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