

## **The Use of Coffee as Body Scrub for Body Skin Care**

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### **Abstract**

*Female students complained about the issue of dry body skin. Their skin was dull, brittle, scaly, and wrinkled quickly. Researchers used coffee scrubs to treat body skin in this research. The purpose of this study is to examine the use of coffee scrub for body skincare once a week, as measured by the moisture and brightness of the body's skin. This form of study was a pre-experimental research design of a pre-test and post-test group. The goal of the study was that the skin on the body's hands has dry skin. The research population was students aged 19-25 years who had dry skin. The sample consisted of five people — data collection methods with a t-test. The data review results indicate that the average moisture content of the skin after the seventh treatment was 3.8 in the moist category. Meanwhile, the seven treatments of brightness measure had an average score of 4.4 in the bright category. The score was 6.766 based on the t-test. The impact of coffee scrub on body skincare is One day a week for seven treatments. Coffee is recommended to be used as a scrub for body skincare.*

**Keywords:** *Body Scrub, Coffe bean, body skin care, treatment*

### **Introduction**

All can have fair, clean, fresh, and well-care skin if the care is done correctly and regularly. Clean, well-groomed skin can indeed exude its appeal and create self-confidence. According to Tranggono (2007: 32), the skin is divided into healthy, regular skin, and oily skin. Dry skin is skin with lower moisture content, average skin with high moisture content and low oil content to normal, whereas oily skin is oily and high water. Dry skin type is one of the most troublesome skin forms.

Based on the author's interviews with students from the Department of Make-up and Beauty aged 19-24 years, a total of 10 people have dry body skin, alleging that their skin looks dull and scaly, which disturbs their appearance. Moreover, we need to take care of the body, one of the body scrubs. Lulur is a topical product to remove dirt, grease, or dead skin by massaging the whole body. The effects are instantly apparent. The skin would be smoother, firmer, fragrant, and radiant (Fauzi and Nurmalina, 2012: 129). Traditionally, cosmetics can use coffee as a scrub.

Coffee has a rough surface, which is useful for smoothing the body. Coffee is used to make scrubs. According to Arisandi (2017), coffee is nutritious for circulation in the blood since it is also used as an ingredient in anti-cellulite creams. The coffee used in this research is Arabica coffee. According to Mabrouk (2005), the coffee scrub contains glycerin (olive) fruit oil, stearic acid that acts as an antioxidant and a natural moisturizer required to moisturize the skin.

Based on Dwiyantri (2013) research, it is believed that there is an impact of adding coffee grounds on the manufacture of scrubs. Coffee grounds contain antioxidants and

isoflavones, useful for wrinkles on the skin, moisturizing the skin, smoothing the skin, and removing dead skin cells. Coffee has the benefit of softening the skin so that it has healthy nutrition to protect the skin from sun damage and avoid the damage to collagen or elastin caused by wrinkles on the skin. According to Dewi (2012), caffeine is an alkaloid chemical compound known as trimethylxanthin with the molecular formula  $C_8H_{10}N_4O_2$ . The amount of caffeine in the coffee grounds was 1-1,5 percent. The purpose of this study was to examine the impact of the use of coffee scrub on body skincare with a frequency of 1 time per week in moisture and brightness of the skin.

## Method

This method of study was pre-experimental. Sugiyono (2012: 32) notes that the experimental method is a research method that purposefully allows variables resulting from a specific treatment and a control group to be calculated by a comparison group to assess a particular treatment's impact. This research's goal was coffee scrub, while the sample in this study consisted of six students aged 19 to 25 who had dry skin. This research was performed on 6 November 2014 at the Department of Makeup and Beauty, FPP UNP. The research design was pre-tested-post-testing with data collection techniques in this study was observation and recording. The study hypothesis is based on the t-test. The measurement of the coffee used in this study was seen from the body's moisture using a skin analyzer, while from the body's skin moisture appearance using a skin tone. For more information, the assessment metrics can be found in the following table:

**Table 1** Assessment Criteria for Body Skin Moisture Indicators

Score	Category	Skin Analyzer Data
5	Very moist	$\geq 47\%$
4	Moist	43 - 46%
3	Normal	38 - 42%
2	Dry	34 - 37%
1	Very dry	$\leq 33\%$

**Table 2** Assessment Criteria for Brightness of Body Skin

Score	Category
5	Very bright
4	Bright
3	A little bright
2	Dark
1	Very dark

The research procedure for the use of coffee scrubs with several stages, namely: the preparation stage, the treatment stage, and the assessment, which will be explained below:

The preparation stage includes:

- a. Preparation of tools, the tools used are:
  - 1) Facial bad.
  - 2) Small washbasin, which serves to put water.
  - 3) Melamine bowl for laying the scrub.
  - 4) Spatula to take the scrub.
- b. Preparation of materials, the materials used are:
  - 1) clean water, warm water.
  - 2) Cotton / tissue.
  - 3) Long cloth/batik cloth to cover the body.
  - 4) Large
  - 5) towel Small towel for the client's base during treatment.
  - 6) A washcloth to clean cosmetic residue.
  - 7) Hair headband for smoothing hair samples and operators.
  - 8) Kemben to cover the body of the sample down (legs).
  - 9) Work clothes for operators.
- c. The cosmetic preparations used were:
  - 1) Arabica coffee as much as three tablespoons mixed with warm water with a ratio of 1: 1 then stirred until thickened and then applied to the hands as a scrub. They were determining a sample of 5 people aged 19 to 25 years who have dry body skin.
  - 2) Prepare a coffee scrub, and place it in a container for one use (3 tablespoons) per user.

#### *Treatment Stage*

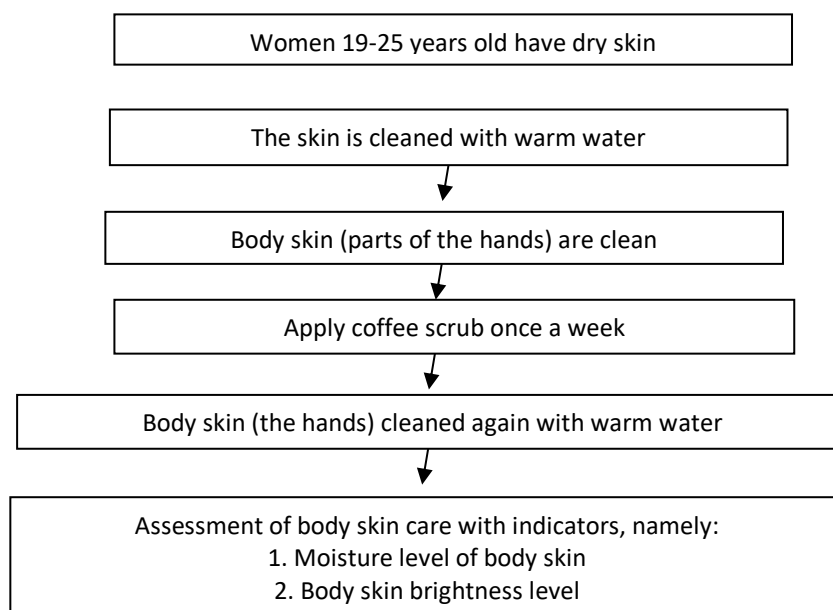
- a. Before the treatment, the object is analyzed, or an assessment is carried out to collect the initial pre-test data.
- b. Clean both hands with warm water to open the skin's pores, then apply coffee scrub after cleansing with baby soap.
- c. Starting from the first treatment, up to 7 treatments regularly with the use of coffee scrub. It can be grouped as follows: The group (experimental group) was given treatment using coffee scrub, with a resonant frequency, one time a week for seven treatments observed / in moisture and skin brightness.

#### *After treatment*

The stages after treatment are:

After treatment, the observed skin brightness changes using a skin tone scale measuring instrument with analysis using photo media. Meanwhile, to see the moisture of the body's skin using a *skin analyzer*. According to the predetermined / designed achievement indicators, an assessment is carried out by filling out the assessment sheet that has been made based on the defined categories. Comparing the success rates of moisture and body skin brightness in the pre-test and post-test of each experimental group and processed the data on assessing moisture level and body skin brightness through coffee scrubs.

For more details on this research procedure, it can be seen through a chart of the process of implementing body skincare as follows:



**Figure 1. Research Process Chart**

## Result and Discussion

### **Description of Data on the Use of Coffee Scrub with Body Skin Moisture Indicator A,**

A sample of 5 people was treated with seven coffee scrubs. Treatment times. Based on the assessment of the use of coffee scrubs before treatment (pre-test) and assessment after treatment (post-test) based on indicators of moisture and skin brightness, the following data were obtained:

**Table 3** Assessment of Research Samples on Skin Moisture Indicators

Samples	Pre-test	Category	Treatment Results (Posttest)							Sum	Average
			Ek 1	Ek 2	Ek 3	Ek 4	Ek 5	Ek 6	Ek 7		
1	2.0	dry	2.0	2.0	3.0	3.0	3.0	3.0	4.0	20.0	2.9
2	2.0	dry	2.0	2.0	2.0	3.0	3.0	4.0	4.0	20.0	2.9
3	1.0	dry	1.0	2.0	2.0	3.0	3.0	4.0	4.0	19.0	2.7
4	1.0	dry	1.0	2.0	3.0	3.0	3.0	3.0	4.0	19.0	2.7
5	1.0	dry	1.0	2.0	2.0	2.0	3.0	3.0	3.0	16.0	2.3
Average Score											
	1.4	dry	1.4	2.0	2.4	2.8	3.0	3.4	3,8		

**Table 4** Average Score of Coffee Scrub Usage Indicator of Skin Moisture

Assessment of Treatments -	Average Score.	Moisture Category
Pre-test	1.4	
Treatment 1	1.4	Very Dry
Treatment 2	2.0	Dry
Treatment 3	2.4	Dry
Treatment 4	2.8	Normal
Treatment 5	3.0	Normal
Treatment 6	3.4	Normal

Treatment 7	3.8	Moist
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Based on the data description table, the average score of coffee scrub treatment on the skin moisture indicator above means that the average body skin moisture score of the five samples in treatment 7 has a score of 3.8 in the moist category

#### **Description of Research Results on the indicator of Body Skin Brightness**

Assessment of body skin brightness is done using the skin tone brightness scale. For more details, a description of the results for each sample can be seen in the following table:

**Table 5** The success rate of the treatment on each sample in brightness indicator skin

samples	Pre-test	Treatment Results							Fri	The mean
		Ek1	Ek2	Ek3	Ek 4	Ek5	Ek 6	Ek 7		
1	2.0	2.0	2.0	3.0	3.0	3.0	4.0	4.0	21.0	3.0
2	1.0	2.0	3.0	3.0	3,0	3.0	3.0	4.0	20.0	2.9
3	2.0	2.0	3.0	4.0	4.0	4.0	4.0	5.0	26.0	3.7
4	2,0	2.0	2.0	3.0	4.0	4.0	4.0	4.0	23.0	3.3
5	2.0	2,0	2.0	2.0	3.0	4.0	4.0	5.0	22,0	3.1

**Table 6** Average Score of Body Skin Assessment using Coffee Scrub on Body Skin Brightness Level Indicator

Assessment of Treat To -	Average Score Assessment	Category Brightness
Pre-test	1.8	Dark
1	2.0	Dark
2	2.4	Dark
3	3.0	Slightly Bright
4	3.4	Slightly Bright
5	3.6	Bright
6	3.8	Bright
7	4.4	Bright

Based on the table above, the average score of skin brightness indicators at the seven meetings obtained 4.4 in the bright category.

#### **Analyst Requirements Test**

Before testing the hypothesis, the data must meet two requirements for analysis, namely normality and homogeneity. For more details, the following are the results of the pre-test and post-test data analysis requirements for each assessment indicator:

#### **Normality**

The normality test was carried out using the *Kolmogorov Smirnov* test (KS test). The normality test calculation for the skin moisture indicator for the pre-test is 0.510, and the post-test is 0.759, while the significance level used is 0.05. Skin moisture indicator with normal data distribution as for the brightness of the pre-test score of 0.214 and the post-test of 0.9, it was stated that the pre-test and post-test data for skin brightness indicators had normal data distribution.

**Homogeneity**

Test The homogeneity test is a test used to determine whether the group variance is homogeneous. For this reason, a levene statistical test. From the data, the score of 0.307 concluded that the data for the skin moisture indicator varied homogeneously. While the homogeneous test data obtained a score of 0.587. Thus, it can be concluded that the skin brightness indicator data varies homogeneously

**Hypothesis Test Hypothesis**

Test for Skin Moisture Indicators with the t-test

If the data is normally distributed, and the two data groups are homogeneous, then the statistical hypothesis testing used is the t-test. The results of the t-test analysis can be seen in the table below:

**Table 7** The results of the t-test analysis of the

Pair	Pretest- Posttest	Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the Difference				
					Lower				Upper
1		42,501 19,007 181.371 75,829			128,600	6,766	4	.002	

The above data shows that the value of t arithmetic amounted to 6.766, while the value of the provisions df t table for four at the significance level of 5% amounted to 2.776 and at the 1% significance level amounted to 4.604. Thus the value of t count > t table (6.766 > 2.776) and (6.766 > 4.604) proves that the hypothesis that there is an effect of using coffee scrub on skincare for skin moisture indicators is accepted, both at the 95% confidence level.

**Hypothesis Test for Skin Brightness Indicator with t-test**

**Table 8** Analysis of t-test results for skin brightness indicator

pair	Pre- test- Posttest	Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
		122,800	29,491	13,189	159,418	86,182	9,311	4	.001

Based on the hypothesis test that the t-count value is 9.311, while the t-table value for df four provisions at the 5% significance level is 2,776, this proves that the hypothesis states that there is an effect of coffee scrub usage on body skin, an indicator of skin brightness is accepted, at the 95% confidence level.

## Conclusion

Based on the results of data analysis obtained from this study, the following conclusions can be formulated Based on the results of using coffee scrub for skincare with a frequency of 1 time a week (7 treatments), a moisture indicator obtained an average score of 3.8 in the Moist category. Meanwhile, the brightness indicator of using coffee scrub for body care obtained a score of 4.4 in the Bright category. There is a significant difference in the effect of using coffee scrubs on body skincare between before (pre-test) treatment and after (post-test) treatment with a frequency of once a week (7 treatments).

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