

Theobroma Beeswax Foot and Hand Spa Cream

Regina E. Gloria, PhD.^a, August V. Tuiza, EdD.^b

espirituregina@gmail.com^a
augustuiza@gmail.com^b

Laguna State Polytechnic University Sta. Cruz Laguna 4009 PHILIPPINES

Abstract

The study was conducted to produce cocoa wax foot and hand spa cream for the following questions: 1. Can cacao and bee wax be made into foot and hand spa cream? 2. What is the process of preparing cocoa and bee wax foot and hand spa cream? 3. Is cocoa and bee wax foot and hand spa cream acceptable in terms of a. texture b. color c. odor d. effectiveness? The respondents of the study were the twenty (20) faculties of Laguna State Polytechnic University, ten (10) from the College of Arts and Sciences, ten from the College of Nursing, and ten (10) students from the College of Arts and Sciences. The study used an experimental method of research to determine if cocoa and bee wax foot and hand cream are acceptable. A scorecard was used in evaluating the acceptability of cocoa and bee wax foot and hand spa cream by thirty (30) respondents. The data collected were subjected to various statistical treatments such as weighted mean and percentage. Seven or seventy (70) percent of the respondents rated the texture of cacao and bee wax foot and hand spa cream as "Very Good". Five (5) or fifty (50) percent (%) of the respondents rated the odor of cacao and bee wax foot and hand spa cream as "Excellent". Five or fifty (50%) percent of the respondents rated the color of cacao and bee wax foot and hand spa cream as "Very Good". Seven (7) or seventy percent (70%) of the respondents rated the effectiveness of cacao and bee wax foot and hand spa cream as "Very Good". The weighted mean of sensory qualities of cacao and bee wax foot and hand spa cream was "Very Good". Therefore, the hypothesis states that cacao and bee wax foot and hand spa cream is acceptable in terms of texture, odor, color, and effectiveness is partly upheld.

Keywords: Theobroma, bee wax; foot and hand spa cream; odor; color; texture

1. Introduction

At present, our nation is facing political, economic, and moral problems in addition to pandemics nowadays as the covid-19 that caused many Filipinos to become seriously ill and require medical attention. Despite the problems Filipinos specifically, women are still beauty conscious and want to have softer and wrinkled free hands and feet. They are naturally hygienic and want a product that may help when it comes to their hand and foot protection. Our technology continues to search and discover different varieties of beauty products. However, some women cannot afford to have the product they want because of the high prices. In our country, we have many useful plants and insects like cocoa (*Theobroma cacao*) and bees for ornamentals and for cosmetic benefits that can calm and repair skin and leaves that soothe skin inflammation, burns, rashes, wounds, insect bites, and the like. This can be found in stores, wet markets, and even at home. We can make chocolates, cocoa syrup, and the like out of cocoa. As an alternative medicine, it is a good source of

flavonoids a chemical that lowers blood pressure and causes relaxation of the veins. Cocoa and bee wax as hand and foot spa cream will be tried in this study.

The cacao tree (*Theobroma cacao*) originated in the Amazon rain forest and then later moved to Central America. The Mayan tribes in Central America cultivated the cacao tree about 1500 B.C. Later, the Aztecs made a sacred beverage called “chocolati” where we get the word chocolate. Cacao bean is available in hot cacao, cacao tea, cacao powder, and chocolate bars. Cacao can be a rich source of antioxidants including flavan-3 oils, epicatechin, and catechin. The latest information is that cacao extract when applied to the skin topically can be even more beneficial to the skin than green tea extract, since it contains antioxidants. Because of its clinical results, I decided to find out how acceptable cacao bee wax spa cream is as a substitute to commercial foot and hand spa products for moistening and softening.

The study focused to determine if softening cacao (*Theobroma cacao*) can moisturize foot and hand. Specifically, it sought to answer these questions: 1. Can cacao and bee wax be made into foot and hand spa cream? 2. What are the process of preparing foot and hand spa cream? 3. Are cacao and bee wax spa cream acceptable as a foot and hand moisturizer and softener in terms of its texture, odor, color, and effectiveness.

The present study was limited only to making cacao bee wax foot and hand spa cream. The respondents of the study were thirty (30) faculties and students of Laguna State Polytechnic University, Santa Cruz Campus, Santa Cruz Laguna, ten (10) from the College of Arts and Sciences, ten (10) from the College of Nursing, and ten (10) students from the College of Arts and Sciences. The faculty and students' respondents answered the scorecard prepared by the researcher that focused on the interest towards making cacao ad bee wax as foot and hand spa cream.

According to Lozanta (2015), herbal cream/ointment preparations were used as an alternative treatment of skin growth that requires only one application of the herbal cream/ointment with minimal patient discomfort and less scar formation. The herbal cream/ointment preparations can treat and remove unnecessary skin growths from any area of the body even in delicate parts that cannot be treated with electro cannery.

Dull (2017), stated that cacao butter and shea butter moisturizing body cream penetrate the skin with a superior to smoothing rough areas like knees, feet, heels, elbow, and hands and help fade blemishes and unattractive scars or marks. Furthermore, Grieve and Guerrero conducted studies and found out that the oil of *Theobroma cacao* butter is excellent and is used to soften and protect chapped hands and lips.

2. Methodology

The study used the experimental method of research to determine the sensory qualities of cacao and bee wax foot and hand spa cream which focused on the acceptability of *Theobroma* bee wax and its sensory qualities such as texture, odor, color, and effectiveness. The respondents of the study were the thirty (30) faculty and students of Laguna State Polytechnic University Santa Cruz Campus, Santa Cruz, Laguna. The purposive sampling techniques were used and analyzed using the weighted mean and standard deviation. The experimental method is more useful than any other method of investigation. Calderon and Gonzales (2013) defined the experimental method of research as a method involving the control or manipulation of conditions for the purpose of studying the relative effects of various treatments applied to members of a sample, or some treatments applied to members of different samples. The procedure in conducting the study is: first, preparation of all the materials needed, 'second, washing the ingredients before exposing to the sun to remove the juice attached to the cocoa juice; third, fry cocoa beans and then grind the cocoa beans; fourth, heat beeswax until becomes oily; fifth, mix the pounded cacao beans to the heated bee wax; sixth, let it boil for 15 minutes; seventh, pour into a cream container and let it cool before using. In producing the *Theobroma*

beeswax foot and hand spa cream, trials and revisions were also done to obtain favorable results. The construction time frame in preparing Theobroma beeswax foot and hand spa cream was also done. To find whether the experimental product will help the economy, cost and analysis made are also done. The data gathering instrument used in the study was the scorecard used by the respondents to evaluate the cocoa beeswax foot and hand spa cream. During the evaluation process, the respondents were given the results and beeswax foot and hand spa cream samples were applied for seven (7) days. They will rate the experimental foot and hand spa cream based on its qualities such as texture, odor, color, and effectiveness to substitute the commercial products. Each quality was gauged using the scale and description as 5 – Excellent, 4- Very Good, 3 – Good, 2 – Fair, and 1 – Poor.

3. Results and Discussion

Results and discussion of Theobroma beeswax foot and hand spa cream are the following:

Color

The table shows the average mean and standard deviation gathered from the respondents on the color of the product.

Table 1. Level of Acceptability of Theobroma Foot and Hand Spa Cream in terms of Color

Sensory Qualities In terms of color	Mean	SD	Remarks
1. The Theobroma bee wax foot and hand spa cream is attractive to the eye.	5	0	Highly Acceptable
2. The product is comparable with the other commercial foot and hand spa cream	5	0	Highly Acceptable
3. Theobroma bee wax foot and hand spa cream is acceptable in terms of its color.	4.9	0.3	Acceptable
Average Mean. 5 0.2 Highly Acceptable			

Legend:

4.21 – 5.00	Highly Acceptable
3.21 – 4.20	Acceptable
2.61 – 3.40	Moderately Acceptable
1.81 – 2.60	Fairly Acceptable
1.00 – 1.80	Not Acceptable

The table presents the level of acceptability of Theobroma foot and hands spa cream in terms of its color. It indicates that number 1 depicts the Theobroma foot and hand spa cream is attractive to the eye from the respondents. It only shows that Theobroma beeswax foot and hand spa cream is acceptable in terms of color as reflected by the average mean of 5 and with 0.3 standard deviations with highly acceptable.

Odor

Table 2 presents the level of acceptability of Theobroma bee wax foot and hand spa cream.

Table 2. Level of Acceptability of Theobroma Beewax Foot and Hand Spa Cream in terms of odor

Sensory Qualities in Terms of Odor	Mean	SD	Remarks
1. the foot and hand spa cream scent satisfy the user	4	0.8	Acceptable
2. Theobroma beeswax foot and hand spa cream smell good.	4.7	0.5	Acceptable
3. the odor is satisfying and enjoyable to use by many.	4.2	0.8	Acceptable
Average Mean 4.3 0.2 Acceptable			

Legend:

4.21 – 5.00	Highly Acceptable
3.21 – 4.20	Acceptable
2.61 – 3.40	Moderately Acceptable
1.81 – 2.60	Fairly Acceptable
1.00 – 1.80	Not Acceptable

The table presents the average mean gathered from the respondents. In terms of odor. It indicates that the foot and hand spa cream satisfies the user. The study conducted by Esmerma in 2014 affirms that Theobroma can be made into foot and hand spa cream. The result of the study was rated acceptable with a mean of 4.3 and 0.2 SD with acceptable.

Texture**Table 3.** Level of acceptability of Theobroma Beewax Foot and Hand Spa Cream in terms of Texture

Sensory Qualities in terms of its Texture	Mean	SD	Remarks
1. Theobroma bee wax foot and hand spa cream is soft and smooth to the skin.	4.8	0.4	Acceptable
2. The product does not dissolve easily.	4.9	0.3	Acceptable
3. theobroma bee wax foot and hand spa cream are acceptable in terms of its texture.	4.7	0.5	Acceptable

Average Mean. 4.8. 0.1. Acceptable

The table reveals the level of acceptability of theobroma beeswax foot and hand spa cream in terms of texture. It further indicates that the cream is soft and smooth to the skin having remarks of acceptable with a mean of 4.8 and an SD of 0.4. the overall mean with a score of 4.8 and SD of 0.1 indicates acceptable. The texture is the measure of the variation of the intensity of a surface quantifying properties such as smoothness, coaters, and regularity as defined in the free online dictionary (Howe, 2010). In this study discussed by Howe, 2010, the texture is the measure of the variation of the intensity of a surface quantifying properties such as smoothness, coarseness, and regularity and ability to manipulate the texture from thick and pipe-able to fluid and pourable allows a wide variety of possible techniques. For example, foot and hand cream can be swirled in the mold to create a spin swirl. On the other hand, extremely thick foot and hand cream can be piped and manipulated to create shapes and texture.

Effectiveness

Table 4 presents the level of acceptability of Theobroma Beewax Foot and Hand Spa Cream in terms of its effectiveness.

Table 4. Level of Acceptability of Theobroma Beewax Foot and Hand Spa Cream in terms of its Effectiveness.

Sensory Qualities in terms of Effectiveness	Mean	SD	Remarks
1. Theobroma beeswax foot and hand spa cream moisturizes hard, rough and cracked skin at its best.	4.9	0.3	Acceptable
2. the product keeps the skin smooth, soft , supple and healthy.	5	0	Highly Acceptable
3. the product reduces sun damage and gives the perfect glow.	5	0	Highly Acceptable

Average Mean. 5. 0.2. Highly Acceptable

The table shows that the product moisturizes hard, rough, and cracked skin at its best shows that the product is effective with a mean score of 4.9 with remarks of acceptable. Likewise, the product also shows that it keeps the skin smooth, soft, supple, and healthy with a remark of highly acceptable. It also shows that the product reduces sun damage and gives the perfect glow of the skin with a remark of highly acceptable.

According to Camalig ,(2015) the foot spa is a great way to help you pamper yourself after a stress-filled day as it improved the process of reflexology which can benefit your entire body.

4. Conclusion and Recommendations

The following are the conclusions based on the findings of the study:

Most of the respondents rated the product as Highly Acceptable in terms of color and effectiveness. It means that Theobroma beeswax foot and hand spa cream is easy to apply. Likewise, most of the respondents also rated the product acceptable in terms of odor and texture which means that the product has a pleasant smell that can attract the consumers. In addition, the product is soft smooth and easy to apply therefore the product was acceptable in terms of color, odor, texture, and effectiveness.

Based on the findings and conclusions of the study the following are recommended:

it is recommended Theobroma beeswax foot and hand spa cream be used as an alternative moisturizer being cheaper as compared to commercialized foot and hand spa cream. The life span of Theobroma beeswax foot and hand spa cream should be considered. it is also recommended to plant cacao trees in the backyard or in the community as a source of herbal medicine

Reference:

- Baumann, L. (2012). Moisturizing Agents. In: Baumann L, editor. *Cosmetic Dermatology- Principles and Practices*. 1st ed. New York: Tata McGraw Hill; 2012
- De Araujo, Q.R., Gattward, J.N. et.al. (2016). Cocoa and Human Health: From Head to Foot – A Review's. *Rev Food Sci. Nutr*, 2016, 56-12
- Johnson, AW., (2015). Cosmeceuticals: Functions and the skin barrier. In: Draelos ZD, editor, *Procedures in cosmetic dermatology series: cosmeceuticals*. 1st ed. Philadelphia: Elsevier; 2015; 97-102.
- Khan, F.M. and Ahmed, M.S. 92013). "Comparative Toxicity of Neem Fruit Extract and Cypermethrin Against *Tribolium confusum* and papilo demolous Linn" Southern zone Agricultural Research Center, Pakistan
- Kraft, J.N. Lynde, CW. (2015). Moisturizer: what they are and a practical approach to product selection. *Skin Therapy Lett*. 2015;10(5):1 – 8
- Loden, M. (2003). Role of topical emollients and moisturizers in the treatment of dry skin barrier disorders. *Am J Clin Dermatol*. 2003;4(11):771 - 788
- Lozanta, E.K., et.al. (2015). "Calamansi Facial Cream" Laguna State Polytechnic University, Main Campus, Santa Cruz, Laguna
- Rawlings, AV., Canestrari, DA.,(2014). Moisturizer technology versus clinical performance. *Dermatol Ther*. 2014
- Samaniego, I.B. (2014). *Neem Leaves Ointment*", Laguna State Polytechnic University, Main Campus, Santa Cruz, Laguna
- Wahid, M.E.A. et.al. (2016). The antioxidant effect of Beackes frutescence microemulsions dietary supplements on skin absorption studies. Volume 2, 2016 – issue 1 p. 86-92
- Zyzelewicz, D. Budryn, G. (2018). The Effect on bioactive components and characteristics of chocolate by functionalization with raw cocoa beans. *Food Res. Int*. 2018, 113-234 – 244