

FORMULATION AND EVALUATION OF HERBAL ANTI-TANNING SOAP FROM POTATO

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ABSTRACT

Herbal products have become more and more accepted in our society because they are made from natural raw Materials. They are easy to use with minimal or no side effects. The present work was carried out with potatoes as the main ingredient and many natural ingredients were used in the development of herbal Soap. Herbal soap is free from harmful and hazardous chemicals and has several benefits: it makes skin healthy and soft as compared to other commercial soaps. This presented soap was evaluated on several Parameters such as colour, sweetness, Ph, moisture content, foam stability, melting point and Breaking point. Because natural materials are easy to handle and apply, herbal products have become more and more accepted in society. Herbs are a sign of safety that has no negative side effects. The purpose of this research was to develop and evaluate herbal soap because potato is rich antioxidant and helps to remove Unwanted tan and dull skin tone and gives us a natural glow. It has a natural properties and has no negative effects. A product called herbal soap includes potatoes, aloe vera, oatmeal powder and a vitamin E capsule. Natural products don't contain any harmful ingredients. Considering the Various benefits of herbal products, they should be used to protect the skin from sun damage, reduce tanning and Promote even skin tone.

KEYWORDS: Herbal products, herbal Soap, Aloe vera.

INTRODUCTION

Definition of Herbal Soap: Herbal soap is a type of soap that incorporates herbs, botanicals, or plant extracts into its formulation. These natural ingredients are added to provide various skin benefits, such as moisturizing, soothing, and protecting the skin.

Anti-tanning soap

Tanning is a common issue faced by individuals, particularly those living in tropical regions. Prolonged exposure to the sun's ultraviolet (UV) rays leads to the production of melanin, resulting in darker skin tone. Chemical-based anti-tanning products are available, but they often have adverse effects on the skin. Herbal anti-tanning soap offers a natural and safer alternative. This project aims to formulate and evaluate an herbal anti-tanning soap using natural ingredients.



Fig-1.

HEALTH BENEFITS

- Improved skin hydration
- Reduced hyperpigmentation
- Enhanced skin radiance

BENEFITS OF USING POTATO IN SOAP

- **Anti-tanning properties:** Rich in antioxidants, potato extract helps repair and protect the skin from UV.
- **Natural Ingredients:** potato extract contains natural enzymes that help whiten and brighten the skin, reducing the appearance of tan.
- **Gentle Cleansing:** Herbal soaps are designed to be gentle and non-irritating, making them suitable for sensitive skin.

TO PREVENT RADIATION

- **Sun Exposure:** UV rays cause melanocytes in the skin to produce more melanin, resulting in tanning. Potato Extract.
- **Potato:** Inhibits the activity of tyrosinase, an enzyme responsible for melanin production.
- **Tan reduction:** The skin is less able to produce excess melanin, resulting in a more even and radiant complexion.

MATERIALS AND METHODS

Materials

Sr. No	Materials	Company Name
1.	Potato	Local market
2.	Aloevera	From Nature
3.	Oatmeal powder	Anantapur
4.	Vitamin-E Capsule	Evion
5.	Glycerine Soapbase	Vedini Ayurveda

Method

Step-1: Start the extraction with potatoes. Extract the potato juice using a potato masher.

Step-2: Strain the extracted potato and remove impurities.

Step-3: Mix the potato juice with other ingredients such as aloe vera, oatmeal powder, vitamin E Capsule, and lavender oil.

Step-4: Melt the Glycerine Soap base using the double-boiling method.

Step-5: Mix the melted Glycerine Soap base with the potato starch and other ingredients.

Step-6: Pour the melted mixture into the soap mold and let it dry at room temperature. Once it cooled, it is ready to use.

FORMULATION OF SOAP

Formulation-1

Sr. No.	Ingredients	Quantity	Uses
1.	Potato juice	15ml	Anti-tanning agent
2.	Aloe vera	5ml	Moisturizing agent
3.	Soapbase	25gm	Base
4.	Vitamin-E Capsule	1	Antioxidant
5.	Oatmeal juice	5ml	Treating acne

Formulation-2

Sr. No	Ingredients	Quantity	Uses
1.	Potato juice	10ml	Anti tanning agent
2.	Aloe vera	5ml	Moisturizing agent
3.	Vitamin-E	1	Antioxidant
4.	Glycerine soapbase	35gm	Base

Formulation-3

Sr. No	Ingredients	Quantity	Uses
1.	Oatmeal juice	15ml	Treating acne
2.	Aloe vera	10ml	Moisturizing agent
3.	Vitamin-E	1	Antioxidant
4.	Glycerine Soapbase	25gm	Base

EVALUATION PARAMETERS

Colour and texture: The formulated soap is checked for colour, shine, and **softness**.

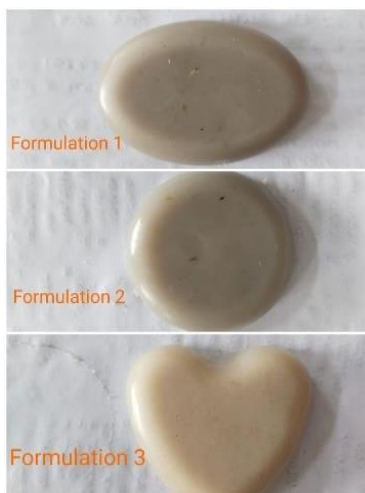


Fig-2.

Foam height: To estimate the foam height, 0.5gm of the soap sample was in 25 ml of distilled water. Dissolved the mixture was transferred to a 100ml graduated cylinder and the volume made upto 50ml with water. The solution was shaken 25 times and allowed to stand until the aqueous volume reached 50ml. The height of the foam above the water volume was measured.

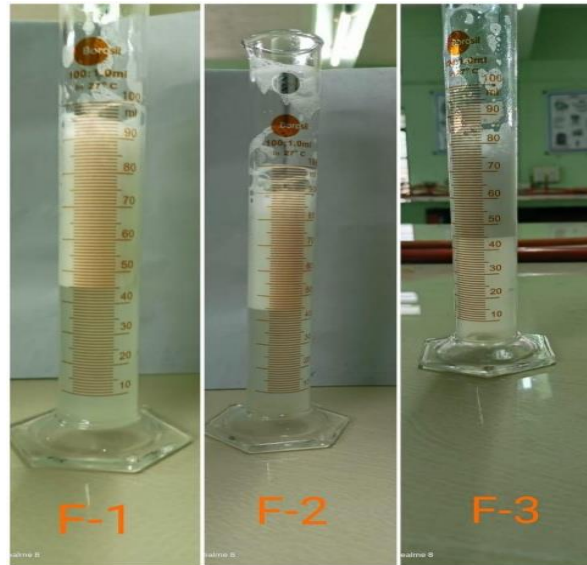


Fig-3.

Foam Retention: 25ml of 1% soap solution was dropped into a 100 mL of graduated cylinder. The cylinder was covered with a hand and shaken 10 times. The foam volume was recorded at 1 min intervals for a total of 4 mins.

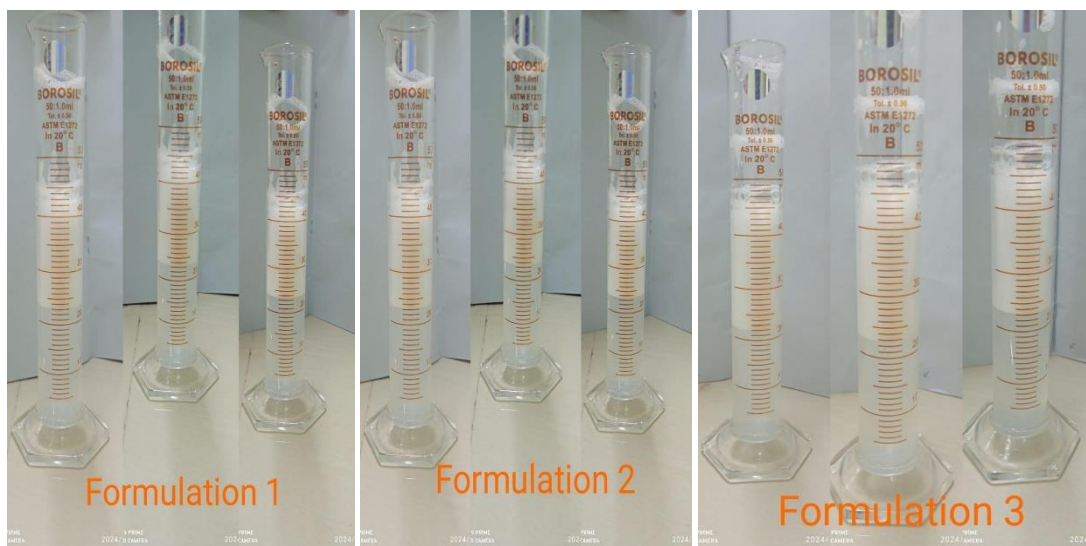


Fig-4.

pH Parameter: Soap pH test. To test, smear some distilled water on the surface of the soap. Use your hand to spread the water around, making a paste with the soap. Using our 1-14 pH test strips, test the paste. If your strip shows a pH between 7 and 10, the soap is no longer caustic and is safe to touch.

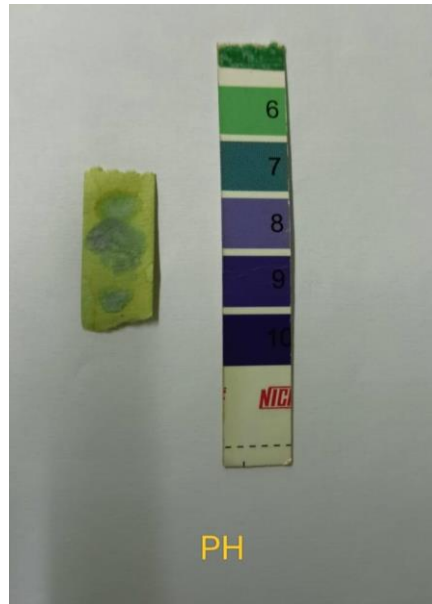


Fig-5.

Irritation test: performed by applying the soap to the skin for 10 mins. If there was no irritation the soap was considered non irritating due to the absence of adverse skin reactions.



Fig-6.

Total fatty matter: Weigh a known quantity of the soap Dissolve it in alcohol, and Evaporate the solvent. The remaining residue indicates the TFM content.

Expected result: Anti -tan soaps should have a moderate TFM (around 60-80%), Indicating good Cleansing properties without being too harsh.

RESULT AND DISCUSSION

Sr. No.	Parameters	Result(F1)	Result(F2)	Result(F3)
1.	Colour	Grey	Grey	Whitish brown
2.	Odour	Aromatic odour	Aromatic odour	Aromatic odour
3.	Shape	Oval	Circle	Heart
4.	Foam height	45 cm	40 cm	35 cm
5.	Foam Retention	1.25 mins	1.5mins	1min
6.	PH	8	8	8
7.	Irritation test	No	No	No
8.	Total fatty matter	88%	76%	92%

CONCLUSION

The herbal product helps to soften, moisturize the skin and reduce inflammation. In this current work, potato extraction is done. Another excipient used is Glycerine Soapbase has a thickening agent or base. The present study has shown that this formulated herbal soap is more satisfactory than commercial soap. Herbal soap has minimal side effects and natural colours or more satisfactory than commercial ones.

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