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FORMULATION AND EVALUATION OF HERBAL ANTI-TANNING SOAP FROM POTATO

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ABSTRACT:

Herbal products are most obtaining acceptance in our society because it is made from natural raw materials. And easy to use with minimum side effects or no side effects. The present work was done by using potato as main ingredient and many natural ingredients were use in the development of herbal soap. Herbal soap is free from harmful, hazardous chemicals and it has many advantages it makes skin healthy and soft as compare to other marketed soaps. This presented soap was evaluated with different parameters like colour , smoothness, Ph , moisture content , foaming stability , melting point and breaking point .

Because natural materials are simple to handle and apply, herbal products are becoming more and more accepted in society. Herbal is a sign of safety that has no negative side effects. The goal of the current research was to develop and assess herbal soap since potato is rich antioxidant and helps in removing unwanted tan and dullness of the skin and gives us a natural grow it has a natural properties and has no adverse effects . A product item called herbal soap includes potato, milk, aloe vera , almond oil, coffee, lime juice and vitamin E capsule. Natural products don't contain any dangerous ingredients. Given the various benefits of herbal product , it should be used to protect skin from sun damage, reduce tan and promote even skin tone .

Key Words : Potato, Solanum tuberosum, Soap

INTRODUCTION

There is very large market of various bath soaps having so many varieties including herbal soaps. Personal hygiene, getting clean is treated as a big business. However, various skins related issues are being experienced by soap users too. Persons having skin issues like dryness, itching, acene, including specific type off soap according to skin type and related issues of patient

The majority of commercial soaps contain ingredients that may hurt skin. Natural herbal soaps can be a good substitute. In terms of medicine and commerce, herbal products have gained relevance on a global scale, and their use has grown due to their efficacy and safety. The most common skin infections in people are caused by bacteria, necessitating careful attention for treatment, improved skin preservation, and maintenance of healthy, youthful-looking skin. Some herbal plant extracts have properties that are antimicrobial, antibacterial, anti-inflammatory, and so forth.

Natural component of herbal medicine has no negative effects on the human body in the vast majority of cases. A pharmaceutical medication that contains antibacterial and antifungal ingredients is known as an "Herbal soap preparation." It is made up of plant parts including leaves, stems, roots, and fruits, and used to treat damage, disease, and keep people healthy.

A natural soap is prepared without a non-natural surfactant, with addition of functional ingredient from natural substances, such as essential oils or plant extracts. Herbs are the natural products could be found in the treatment of almost all diseases and skin problems owing to their high medicinal value, cost effectiveness, availability and compatibility. Hence it can be used in soap base. The attribute of a soap includes gentleness on the skin, rich lather, protection against various skin disorders (including rashes, eczema, scabies) treatment of skin infection (such as ringworm), protection of even skin toning and smoothness of the skin .

Potatoes are a versatile and affordable vegetable that offer a range of benefits for skin health. From soothing inflammation to brightening complexion, the humble potato can be a powerful ally in your skincare routine**.**
Potato is used as brightening ingredient like potassium , vit C and an enzyme called catecholase , it can fade spots hyperpigmentation freckles and tan over time .
It has natural bleaching properties and contain azelaic acid which is known as skin brightening properties
When applied topically, potato can help soothe, nourish, and rejuvenate the skin. Discover how this humble root vegetable can be a powerful addition to your natural skincare routine

Fig no : 01

Benefits of using potato in soap

- **Natural Ingredient**

Potato extract contains natural enzymes that help lighten and brighten the skin, reducing the appearance of tanning.

- **Anti-Tanning Properties**

Rich in antioxidants, potato extract aids in repairing and protecting the skin from UV-induced damage.

- **Moisturizing Effect**

The moisturizing properties of potato extract contribute to maintaining skin hydration, preventing dryness and flakiness.

- **Gentle Cleansing**

Herbal soaps are designed to be mild and non-irritating, making them suitable for sensitive skin.

- **Aromatherapy Benefits**

The therapeutic scents of herbs and essential oils can provide a calming, uplifting experience.

- **Environmental Friendliness**

Herbal soaps are often made with sustainable, biodegradable, and cruelty-free components**.**

History and Origins of Herbal Soap

- **Ancient Traditions**

Herbal soap has roots dating back thousands of years, with various civilizations using natural ingredients for cleansing and skincare.

- **Artisanal Resurgence**

In recent decades, there has been a renewed interest in handmade, natural, and sustainable soap products, driving the growth of the herbal soap market.

- **Modern Innovations**

Today, herbal soap makers continue to explore new botanical blends and production techniques to create unique, high-quality products.

Fig no : 2

Importance of Natural and Herbal products

-Health and Environmental Benefits

Using natural and herbal products promotes healthier skin and reduces environmental impact compared to synthetic alternatives.

-Herbal products are free from harmful chemicals, making them suitable for all skin types, including sensitive skin.

-Supporting the use of natural ingredients helps foster sustainable farming practices and contributes to the preservation of biodiversity.

Fig no : 3

Research Health Benefits

-Enhanced Skin Radiance

The research findings indicate a notable enhancement in skin radiance with the use of potato extract-infused products**.**

-Reduced Hyperpigmentation

Observations show a reduction in hyperpigmentation and uneven skin tone over the trial period.

-Improved Skin Hydration

The study highlights the improved skin hydration levels with regular application of potato extract-based skincare items**.**

Comparative Analysis

Potato Extact soap	Enhance skin radiance	Reduces hyperpigmentation
Convention soap	Hydrates the skin	Minimizes fine lines

Table no: 1 Comparative Analysis

How it Works to Prevent Tanning

- **Sun Exposure**

UV rays trigger the skin's melanocytes to produce more melanin, leading to tanning.
Potato Extract

- **Potato**

Inhibits the activity of tyrosinase, an enzyme responsible for melanin production.

- **Reduced Tanning**

The skin is less able to produce excess melanin, resulting in a more even, radiant complexion.

Drug Profile

It is a herbal natural ingredient belong to the family **Solanaceae (nightshade)** meaning a starchy plant tuber which is one of the most important food crops the plant o nightshade family which produce potatoes on underground runner.

Potatoes are rich in vitamin c which is an antioxidant

Potato is a starchy tuber of the plant Solanum tuberosum. Tubers are a type of organ that some plants use to store nutrients. Potatoes are one type of root vegetable. This name refers to any underground part of a plant that is eaten by humans, regardless of whether it actually is a root.

The Benefits of Potato for skin

Potato is rich in antioxidants and vitamin C, which helps to promote healthy skin and reduce inflammation. Its abundance of vitamins and minerals help to keep skin moisturized.

Antioxidants

The high concentration of antioxidants in potato helps to repair damaged skin and protect against sun damage.

Vitamins and Minerals

The vitamins and minerals in potato help to nourish and moisturize skin . These include vitamins C iron zinc potassium , which help reduce signs of aging while preventing further damage.

Excipient Profile of Potato

Sr No	Excipients	Uses
1	Potato	Anti-Tanning agent
2	Milk	Nourishing agent
3	Aloe-vera and Almond oil	Moisturising agent
4	Coffee	Glowing effect
5	Vitamin e capsule	Antioxidant

Table no 2 : Exciepient Profile

Material and Method

Material : Potato, Milk, Aloe vera, Vitamin E capsule, Almond oil, Glycerin soap base, Coffee

SR NO	Excipients	Quantity	Uses
1	Potato	1	Anti-Tanning agent
2	Vit-e Capsule	1	Antioxidant
3	Aloe vera	15ml	Moisturizing agent
4	Milk	15ml	Nourishing
5	Almond Oil	15ml	Moisturizing agent
6	Coffee	15gm	Glowing effect
7	Glycerin soap base	60gm	Base

Table no 3 : Formulation Table

Method :

Step 1

-Start extraction by Potato .Extract the potato juice with the help of pestle

Step 2
-Filter the extracted potato and remove impurities

Step 3
-Mix the potato juice with other ingredient such as milk, coffee, Almond oil, Vit e capsule, Aloe vera

Step 4
-Melt the Glycerin soap base with the help of heating metal

Step 5
-Mix the melted Glycerin soap base with the mixed potato juice and other ingredents

Step 6
-Pour the melted mixture in the soap mould and let it dry on room temperature or freez

Step 7
-Once it is cool its ready to use

Fig no : 5

Evalution Parameters

1. Colour and Texture: Formulated soap was checked for colour, glossy and smoothness.

2. pH parameter: Testing the pH of Soap. To test, dab a bit of distilled water on the surface of the soap. Use your glove to smear the water around, making a paste with the soap. Using our pH 1-14 test strips, test the paste. If your strip reads between pH 7 and 10, the soap is no longer caustic and is safe to touch.

3. Skin Irritation Test: This Test was carried by applying on the skin and left for 10. Min., Found that there was no irritation on skin.

4. Melting Point Determination: Melting temperature: 130 F (54 C) – begins to melt 140 F (60 C) soap is fully melted Note: do not go more than this temperature, as your soap will start to discolor and lose too much water. Most people would use double boiler on stove top to melt the base for easier control of heat.

5. Breaking point Test: Heat will break it down quicker. Pour as much boiling water in the bowl as you can without overflow.

6.Foam stability : The sample solution (20 mL) is delivered into a 100 mL graduated cylinder with a ground stopper and the cylinder vigorously shaken for 10 s. The foaming power is expressed by the volume ratio of the resulting foam to the remaining solution, and the foam stability by the duration of the foam

Result and Discussions

In this formulation and Evaluation of Herbal Anti-Tanning Soap from Potato was studied and evalution of soap was examined

Sr.No	Evaluation Parameters	Result
1	Colour	Brown
2	Odour	Stimulating
3	State	Solid
4	Foamiability	Good
5	pH	Basic
6	Irritation	No Irritation

Summary and Conclusion

Herbal product helps to softening, moisturising the skin , reduce inflammation. In this present work extraction from potato is done . The another excipient is used is Glycerin soap base as a thickening agent or a base .The present study included that this formulated herbal soap is more satisfactory than marketed soap. The herbal soap has minimum side effects and the natural colourants are more satisfactory than marketed

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