



Formulation and Evaluation of Herbal Soap

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ABSTRACT- The aim is to create an eco-friendly, chemical-free alternative to conventional soaps by incorporating herbs such as neem, tulsi, aloe vera, and turmeric. These ingredients were selected for their antibacterial, antifungal, anti-inflammatory, and moisturizing properties. The soap was prepared using the cold process method, combining herbal extracts with natural oils and lye. The final product was evaluated for physical characteristics such as pH, lathering ability, cleansing power, and skin compatibility. Results indicated that the herbal soap was gentle on the skin, effectively cleaned without causing irritation, and possessed a pleasant natural fragrance. This study highlights the potential of herbal soaps as sustainable and be personal care product. This study explores the formulation and benefits of herbal soap, a natural alternative to commercially produced synthetic soaps. Herbal soap is made using plant-based ingredients such as neem, tulsi, aloe vera, and essential oils, known for their antimicrobial, moisturizing, and skin-soothing properties. The primary aim is to create a gentle, eco-friendly product that supports skin health without harmful chemicals.

KEYWORDS: Neem , Palash flower , Reetha, Rose oil.

1. INTRODUCTION-

Our skin is a largest organ on our body made up of different component including water, protein, lipid and minerals.

The skin is the body's largest organ, covering the entire external surface. It acts as protective barrier against environmental hazards, helps regulate body temperature, enables the sense of touch, and plays a vital role in immune defense.

The skin is composed of three main layers

1. Epidermis
2. Dermis
3. Hypodermis

There are different types of skin and hence you should take care of your skin accordingly. The effective way to treat your skin is to know your skin type and what kind of nutrients the skin needs and act accordingly Skin can be divided into different types according to its texture

The different types of skin are

- 1.Normal skin
- 2.Dry skin
- 3.Oily skin
- 4.Combination

HERBALSOAP-

Most of the commercial soaps contain chemicals that can be harmful to the skin and using a natural herbal soap can be a good alternative Herbal soaps are made using natural herbs and ingredients that are healthier and beneficial for the skin and are less likely to cause any damaging effect.

Some of the natural soap manufacturers also use aroma therapy and herbal treatments to offer the best skin treatment solution for your skin Made of rare herbs and 100% natural ingredients, herbal soaps have found to be highly beneficial for the skin The herbs infused in these soaps therapeutic and healing characteristics that offer specific benefits to the skin, such as nourishment, strength, healing and moisturizing. These soaps also contain super fatty oils, Vitamin E, aloe vera and essential oils, that all lead to the goodness of skin and overall health.

Glycerin helps in retaining the moisture in the skin thereby making these soaps for dry skin conditions. Herbal soap preparation is a medicine it contain antibacterial, anti-ageing anti-oxidant, anti-septic properties which mainly uses of part of plant like seeds, rhizomes, nuts and pulps to treatment for an injury or disease or to achieve health Herbs are the natural products mostly found in the treatment of almost all diseases and skin problems owing to their high medicinal value, cost effective ness, availability and compatibility.

2. METHOD OF FORMULATION-

- Composition of 115gm. formulation of Herbal Soap

Sr. no.	Ingredient	Quantity	Action
1	Orange peel powder	3gm	Anti-microbial Properties
2	Marigold flower	3gm	Anti-inflammatory
3	Palash flower	3gm	Colouring Agent
4	Reetha powder	5gm	Foaming Agent
5	Glycerine	0.5ml	Moisturizing
6	Rose oil	1ml	Fragrance Agent
7	Neem oil	0.5ml	Anti-bacterial Properties
8	Glycerine soap base	100gm	Cleansing Agent

3. Method of preparation of anti-wrinkle cream-

- Get a heat-resistant bowl that can withstand boiling water and hot steam. This bowl will become the top half of your double boiler.
- The double heat method used for the melting glycerin soap base, so give Flame on induction and add some water then add now you have to put the Glycerin soap base piece in the container and melt it.
- After base is melt add all ingredients in the melt soap and mix it proper.

Mix it them finally Stop heat and add rose oil in the preparation solution.

- After you have mixed everything evenly, you have to pour the soap into the mold
- Lastly, you have to wait until the soap has hardened and is ready to use.
- Final soap is ready and it packing in the paper.

4. EVALUATION OF HERBAL SOAP-

1.Colour: The brown colour is show.

2. pH Test: The pH was determined by using pH paper.

3. Foam Height: 50 ml of distilled water was taken and 2 gm of soap sample was dissolved completely by stirring. It was then transferred into a 250 ml measuring cylinder along with washings. The volume was made up to 200 ml by adding distilled water. 25 uniform strokes were given to the mixture and kept stand still for some time until the water volume comes to 200 ml. The foam height was measured from above the water volume.

4.Foam stability: Same quantity of soap sample and quantity of distilled water along with process was carried out as that of foam ability and the mixture was kept stand still for 30 min. After 30 min measurement of foam height was done from above the water volume.

5.Saponification value: 2 gm of substance refluxed with 25ml of 0.5 N alcoholic KOH for 30 min, to this 1 ml of Phenolphthalein added and titrate immediately with 0.5N HCL note the reading As a repeat the operation and examined.

6.% free alkali content: The beaker containing 10g of dried soap was then filled with 150 ml of distilled water. To dissolve the soap, it was heated for 30 to 40 min at reflux on a water bath. This solution was cooled, transferred with the washings to the 250 ml conical flask, and the capacity was filled with distilled water. Two drops of the phenolphthalein indicator were added to 10 ml of the soap solution in the titration flask. The solution was then titrated against 0.1M HCl until it turned colorless.

7.Microbial test: The microbiological assay of antibiotics is done by comparing the zone of inhibition formed by the microorganisms to a specific concentration of antibiotics having a known activity. There are different types of methods for microbiological assay of antibiotics like cup plate method and disc diffusion method. In the cup plate method, antibiotic containing cylinder is diffused into the agar layer containing the microorganisms. The zone is formed around the cylinder. The other method is disc diffusion method where zone of inhibition is measured around the antibiotic disc. The basic objective is to study various methods of microbiological assay.

CUP-PLATE: Prepare nutrient agar plate inoculated with test organism, with a depth of 4-5mm and then allow it to solidify. Divide the NA plate into four equal portions. Then with the help of a sterile borer make four cavities one in each portion. Then fill three cavities with antibiotic solution and in one fill the standard solution. Slowly incubate the plates at 37°C for 24 hours. After incubation measure the zone of inhibition.

5. RESULT AND DISCUSSION:

Evaluation Parameter :

No.	Parameter	Result
1	Colour	Dark Brown
2	pH test	6.5
3	Foam height	9cm
4	Foam stability	3min
5	Saponification value	85
6	% free alkali content	0.9%
7	Microbial test	Zone of inhibition was found around against gram positive bacterium S.aureus

6. CONCLUSION:

The plant marigold powder, orange peel powder, palash powder and reetha powder Used formulation. The prepared formulation when tested for different test gave good results .Herbal soaps have a strong impact on the skin, in terms of making it soft, smooth and supple.on the contrary, chemical soaps are full of damaging substances that can harm the skin as well as health.

The multiple benefits of herbal soaps make them the right choice for better skin care and optimal health outcomes. From the scent to the therapeutic value and the aromatic benefits to medicinal properties, herbal soap heals, soothe and rejuvenate the skin

The prepared formulation when tested for different test gave good results. Furthermore the prepared soap were standardized by evaluating various physico chemical properties such as pH appearance odour in which the exhibit satisfactory.

Herbal soap is a natural and skin-friendly alternative to conventional soaps, offering various benefits due to the use of plant-based ingredients like neem, aloe vera, turmeric, and essential oils. These ingredients not only cleanse the skin but also nourish, moisturize, and provide therapeutic properties such as antibacterial and anti-inflammatory effects. As consumers increasingly seek chemical-free personal care products, herbal soap stands out for its eco-friendliness, safety, and effectiveness. Therefore, it represents a sustainable choice for promoting

healthy skin.

7. FINAL FORMULATED HREBAL SOAP:



8. ACKNOWLEDGEMENT:

I would like to extend our heartfelt gratitude to all our customers, partners, and supporters for their continued trust and patronage of our herbal shop. Your support inspires us to remain committed to providing high-quality, natural herbal products that promote health and well-being.

Special thanks to our dedicated team and suppliers for their unwavering efforts in ensuring we deliver the best nature has to offer. We look forward to serving you with integrity and care as we continue our journey in promoting holistic health through herbal remedies.

Thank you for being a part of our growth and success.

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