International Journal of Pharmaceutical Research and Applications
Volume 9, Issue 5 Sep - Oct 2024, pp: 305-310 www.ijprajournal.com ISSN: 2456-4494

TITLE: XXX

T.Manjula*, L.Dhanush Adhithiyan, M. Krishnamoorthy, C.Navayugan, R.Padhmanathan

Date of Submission: 10-09-2024 Date of Acceptance: 20-09-2024

ABSTRACT
Herbal soap is a natural soap to conventional soap that is Often made using herbs and plant-based ingredients. The use of herbal soap provides various benefits, such as healing the skin, provide natural fragrance, provide Smoothing; it is made using natural ingredients that do not harm The environment and is biodegradable numerous chemical toxins and microorganisms present in the atmosphere may cause chemical infection and damage to the skin cosmetics alone are not sufficient to take care of the skin. Herbal soap ingredients use neem, tulsi, and turmeric, neem leaf and seed were found effective against dermatophytes, turmeric shows anti-inflammatory and anti-bacterial properties and tulsi shows anti viral activity. Herbal soap preparations are medicines or pharmaceuticals because they include antibacterial and antifungal agent.Herbal soaps are also effective in curing different skin problems. These soaps also contain glycerin, which is generally not used in marketable soaps.

KEY WORDS : Herbal soap, Cosmetics, Skin health.

I. INTRODUCTION

Herbal soap is a type of soap made using natural ingredients derived from various herbs and plants. Herbs such as lavender, mint, rosemary, and chamomile are commonly used in making herbal soap. Herbal soap is known for its soothing, rejuvenating, and healing properties, making it a popular choice for people with sensitive or dry skin. Currently, a significant number of cosmetic products are adulterated, and numerous other beauty preparations available in the market are of inferior quality, posing potential risks of side effects such as skin rashes, allergic reactions, and even the development of skin diseases[(1)].

Herbal soap preparations are medicines or pharmaceuticals because they include antibacterial and antifungal agent[(2)].The most vulnerable part of body, skin epidermis, needs to be protected from being exposed to pathogenic bacteria. Noso-comical infection has become a crucial problem in the outcomeof hospital healing, leading to prolonged hospitalization with the risk of transience. The Health Care Workers' (HCWs) hands are the main routes of exposure of drug-resistant pathogens and severe infections[(3)]. This therefore evokes utility of antiseptics for hand cleaning process. Many of the chemical antiseptic are commercially available as sanitizers consisting alcohol, chlorhexidine and so on. These hand-washes help to control contagious disease transmission associated with health care more effectively but they produce diverse effects on prolonged use. Their repeated application can lead to dermal irritation and also pathogen resistance. Some of the causative agents for skin infections are species such as Staphylococcus aureus, Pseudomonas aeruginosa, Bacillus subtilis and Escherichia coli. Some researchers have shown that growing resistance in microbes towards chemical antiseptics has led to severe disease outbreaks. The plants have traditionally been a strong source of anti-infective agents. Plant-based antimicrobials are a huge untapped medicinal source. They are effective in treating infectious diseases while at the same time attenuating many of the side effects often associated with synthetic antimicrobials. Curcuma longa (Turmeric) has a wide range of medicinal and pharmacological applications and is used as a spice, preservative, coloring matter. It has antiinflammatory, anti-HIV, antibacterial, antioxidant, nematocidal, anti-parasitary, antispasmodic and anticarcinogenic activity[(4)]. Soap is a blend of sodium salts of various naturally occurring fatty acids. If the fatty acid salt has potassium rather than sodium, a softer lather is the product. Soap is produced by saphonification or basic hydrolysis reaction of a fat or oil. Mostcommercial soaps contain chemicals that can be harmful to the skin and using a naturalherbal soap can be a good alternative. Herbal soaps are made using natural herbs andingredients that are healthier and beneficial for the skin and are less likely to cause any damaging effect[(5)]. Some of the natural soap manufacturers also use aroma treatment and herbal treatments to offer the best

International Journal of Pharmaceutical Research and Applications
Volume 9, Issue 5 Sep - Oct 2024, pp: 305-310 www.ijprajournal.com ISSN: 2456-4494

skin treatment way out for your skin. Made of rare herbs and 100% natural ingredients, herbal soaps are found to be highly beneficial for the skin. The herbs infused in these soaps have therapeutic and healing uniqueness that offer specific benefits to the skin, such as nourishment, strength, healing, and moisturizing. These soaps also contain super fatty oils, Vitamin E, Aloe, and essential oils that are allied to the goodness of skin and overall health[6].

Herbal soaps are also effective in curing different skin problems. These soaps also contain glycerin, which is generally not used in marketable soaps. Glycerine helps in retaining the moisture in the skin there by making these soaps for dry skin conditions. Herbal soap preparations are medicines or drugs which contain anti-bacterial & antifungal agents which mainly uses parts of plants such as like leaves, stem, roots & fruits for treatment for an injury or disease or to achieve good health. These preparations possess anti-microbial properties andare administered topically and available to apply in various forms like creams, gels, soaps, solvent extracts, or ointments[7]. Soaps are used for staying fresh and for hygienic purposes but after effect of using chemical soap is dry skin, skin damage and skin allergies. Soaps made from chemicals lead to many skin infections and diseases also. They clog the pores of skin and hinder the cells from breathing. By delaying the natural regeneration process of skin, it makes the skin age faster. Moreover, the use of chemicals leads to severe damage to the environment also[8].

AIM:
Formulation And Evaluation Of Herbal Soap

OBJECTIVES
• The Objective Of This Work Is the Formulation And Evaluation Of Herbal Soap Using Turmeric, Neem, Tulsi, And Aloevera
• The Main Objective Was To Formulated Herbal Soap Or Mediated Herbal Soap with anti-bacterial, Anti-Microbial, And Rich Antioxidant
• The Formulate Herbal Soap Having Minimum Side Effects
• The Main Purpose For the Preparation Of Herbal Soap Is To Use Natural Ingredients Instead of Synthetic Chemicals.

COSMETIC
This preparation possesses antimicrobial properties and is administered topically and is available to apply in various forms like creams, lotion gel, soap, solvent extract, or ointment.[9] A variety of creams and soap properties have been used to treat various skin disorders[10].

SKIN TYPES AND BASIC SKINCARE
The requirements for basic skincare
a) Cleansing agent removes the dust, dead cells, and dirt that chokes the pores on the skin. Some of the common cleansers include vegetable oils like coconuts and palm oil.
b) Use of Toners: The toners help to Lighten the skin and keep it from being exposed to many of the dust particles that are floating in the air or other environmental pollutants in our surroundings.
c) Moisturizing: Moisturizing helps the skin to become soft and hydrated.

HERBAL SOAP
Herbal soap preparation is a medicine that contains antibacterial, anti-aging, anti-oxidant, and anti-septic properties. It mainly uses parts of plants like seeds, rhizomes, nuts, leaves, flowers, and pulps to treatment for an injury or disease or to achieve good health[11].
Herbal soap does not contain any artificial color agents, flavor agents, fluorides, etc[12].
Herbs are natural products mostly found in the treatment of almost all diseases and skin problems owing to their high medicinal value, cost-effectiveness, availability, and compatibility[13].

Most common diseases
The most common skin diseases are Eczema, Acne, Rashes, Psoriasis, Allergy, dry skin, urticaria, etc The herbal remedies used for special skin problems are given in Special skin problem and Herbal remedies.

International Journal of Pharmaceutical Research and Applications
Volume 9, Issue 5 Sep - Oct 2024, pp: 305-310 www.ijprajournal.com ISSN: 2456-4494

SOAP

Soap is a common cleansing agent well known to everyone in the world. Many authors defined soap in different ways. Warra[14] Soap can also be said to be any water-soluble salt of fatty acids containing eight or more carbon atoms. Soaps are produced for a variety of purposes likes as washing, bathing, medication.The affinity of the hydrocarbon chain to oil and grease, while the carboxylic group to water is the main reason soap is being used mostly with water for cleaning purposes[15].

SKIN

Skin is very important for all healthcare professionals to have basic information about the structure and function of human skin. Skin is also called a cutaneous membrane. In adults, the skin has a surface area ranging from 2.2m2. The skin has two types, hair-bearing skin that covers much of the body and hairless skin as that of the palms of Hands and so less of feet. Skin is the most exposed part of the body to sunlight, and environmental pollution and is also used for some protection against pathogens[16].

CONTENT OF SOAP

1. TULSI:- ANTI-BACTERIAL AND ANTI-FUNGAL
2. TURMERIC:- ANTIOXIDANT
3. NEEM :- ANTISEPTIC
4. ROSE WATER: FLAVOURING AGENTS, COOLING AGENTS
5. ALOVERA:- IT SOOTHE SUNBURNS OR DRY SKIN

TULSI

BOTANICAL NAME :- OCIMUM TENUIFLORUM
COMMON NAME :- HOLY BASIL.
CHEMICAL CONSTITUENTS :- EUGENOL GERMACRCETERPEN
PART TYPICALLY USED:- LEAVES
COLOUR :- GREEN
PROPERTIES:- ANTIFUNGAL, ANTIBACTERIAL, ANTISEPTIC.

TUMERIC:-

BIOLOGICAL SOURCE:- CURCUMA LONGA
COMMON NAME:- HALDI
PART TYPICALLY USED:- ROOT
EFFECT:-DARK SPOT, NATURAL GLOW, DIMINISH SCARS

USES
Strenthening the overall energy of the body.
Relieving gases in the body.
Dispelling the worms in the body.
Improving digestion in the body.
They regulate the menstruation.
Anti-bacterial,Anti-oxidant,Anti-aging

NEEM:

FAMILY :- MELIACEAE
BIOLOGICAL SOURCE ACTIVE:- AZADIRACHTA INDICA
CONSTITUENTS:- AZADIRACHTA, NIMBIN, NIMBIDIN
PARTS USE:- LEAVES, SEED, FLOWER, BARK

USES
Antiseptic,Anti-oxidant
Boosts immunity
Promote brain health
Manage Diabetes
Promote Liver health
Promote oral health.

ROSE WATER:-

FAMILY :-ROSACEAE FAMILY
BIOLOGICAL SOURCE :- ROSA DAMASCENA
CONSTITUENTS:- PHENETHYL ALCOHOL, GERANIOL, BETA-CITRONELLOL
PARTS USED :- ROSE PETAL

USES
Anti-bacterial,Anti-inflammatory
Soothes sore throats
Helps prevent and treats infections
Heals cuts,scars and burns
Relieves headache

International Journal of Pharmaceutical Research and Applications
Volume 9, Issue 5 Sep - Oct 2024, pp: 305-310 www.ijprajournal.com ISSN: 2456-4494

ALOVERA
FAMILY :- ASPHODELACEAE
BIOLOGICAL SOURCE:- DRIED LATEX OF LEAVES OF IT
CONSTITUENTS :- AMYLASE, MONOSACCHARIDE
PART USED:- GREEN PART OF THE LEAF

USES
Anti-oxidant,Anti-diabetic,Anti-aging
Wound healing
Dental plaque
Canker sores
Constipation
Skin health.

ORANGE OIL
FAMILY **:** Rutaceae
BOTANICAL NAME : Citrus sinenis fruit
CONSTITUENTS : Limonene , α – pinene , Sabinene and β – Pinene , Myrcene
PARTS USED : Rind of the sweet orange

USES
Antimicrobial Activity
Anxiety and Depression
Pain relief
Anti cancer and Antioxidant Activity
Insecticide Activity.

INGREDIENTS :

ALOE VERA	GEL
ORANGE OIL	LABORATORY REAGENT
ROSE WATER	LABORATORY REAGENT
SOAP BASE	LABORATORY REAGENT
NEEM	LEAVES
TULSI	LEAVES
TURMERIC	ROOT

Collection of Tulsi

Ocimumtenuiflorum, or tulsi, leaves were gathered from Majhitar, East Sikkim, and then roughly ground with a mortar and pestle after being shade-dried.

Collection of Neem

Azadirachtaindica, or neem, leaves were gathered from Majhitar, East Sikkim, and then roughly ground with a mortar and pestle after being shade-dried

Collection Aloe vera :

Aloe barbadensis fruit pods were gathered from Singtam, Sikkim. The fresh fruit pods were then chopped into small pieces, and aloe vera gel was gathered with a spatula.

Collection of Turmeric

The dried rhizome of Curcuma longa (Zingiberaceae), which is grown in China, Malaya, West Pakistan, and India, is known as turmeric (Curcuma). After being dug up, the main and secondary rhizomes are boiled or steam-cooked, then dried.

Collection of orange oil

The fruit of the citrus species Citrus × sinensis in the Rutaceae family is the orange, or more precisely, the sweet orange.Oranges are believed to have originated in the Southeast Himalayan foothills, which includes parts of China, India, and Myanmar

Chop the peels into 1-inch pieces and place them in water heated to 110 to 120 degrees Fahrenheit on the stove; "cold" here refers to not heating the peels to a temperature that will harm the oil. Squeeze the oil into a food container and pack the peels into the press.

Collection of Rose water

Rosa rubiginosa is the botanical name for roses. The genus Rosa and Rosaceae contain about 360 species of roses.Fossil evidence indicate that roses existed in Asia, Europe, and North America 30 million years ago. The rose blossom is thought to have originated in Central Asia approximately 5,000 years ago.It is a residue left behind from the distillation of rose oil. "Destillation of the fresh petals" yields the purest rose water. It should be colorless and transparent rather than mucilaginous, and it must be free of all metallic impurities in order to have medicinal efficacy.

International Journal of Pharmaceutical Research and Applications
Volume 9, Issue 5 Sep - Oct 2024, pp: 305-310 www.ijprajournal.com ISSN: 2456-4494

PREPARATION AND METHOD

- Gathering of Essential Components
- Herbal ingredients are gathered, including dried herbs and botanical powder.
- Melt the base of the soap. Chop the soap base into little pieces, then microwave to melt it. Mix the soap base until a smooth consistency is achieved.
- Including Herbs Pour Into Moulds: Slowly add the herbs and stir constantly to make sure they are well distributed throughout the soap.
- Pour the soap into molds after the herbs have been added. Gives it hours or overnight to cool and solidify.
- Slice and put away the soap
- After the soap has completely cooled and solidified, take it out of the mold and slice it into the desired sizes and shapes. Before using, store in a cool, dry place.

EVALUTION OF HERBAL SOAPS

1. Dimension of Physical Properties

Visual inspection was conducted to assess the color, weight variation, appearance, and odor of the manufactured herbal soap.
Using a Ph Meter, the Ph in Each Cream Was Determined

2. Variation in Weight

Gathered ten soaps, determined each one's weight, and then computed the average weight of herbal soap.

3. Yield Percentage

The formulation for the herbal soap was kept in the empty container, and the container was weighed again once the formulation was added. Subtracting the percentage yield yield yielded: Practical yield / Theoretical yield × 100.

4. Dissolvability:

After adding 10ml of solvents to 1.5g of soap and shaking it for three minutes, view the solubility result.

5. Height of Foam

Dissolve 0.4 grams of prepared soap in 100 milliliters of distilled water, and then fill the cylinder to the mark with 50 milliliters of distilled water. Following the procedure, 25 strokes were used to measure the foam height above the aqueous volume.

6. Retention of Foam

Poured the 25 milliliters of the 1% soap solution into the 100 milliliter measuring cylinder. Then, ten shakes were applied to the cylinder. For four minutes, the foam's volume was recorded at one minute for four to five minutes.

7. Skin Sensitivity Examine

On the dorsal surface of your right hand, mark a 2-square-centimeter area. Notice what happened to the hand when the herbal soap was applied to the right side at the designated area. We monitored irritability, erythema, and edema at regular intervals for up to 24 hours before reporting them.

REFERENCE

[1]. Arun SK. "Formulation and Evaluation of Herbal Soap". World Journal of Pharmaceutical Research 12.9 (2023)
[2]. Encyclopaedia. Britannica, 14th Edn; 1929
[3]. Heyam Ali, Naglaa G. Ahmed, RasoolBazighaKadhim, RanaSamour. Formulation and evaluation of herbal hand wash from MatricariaChamomilla flowers extracts. International Journal of Research in Ayurveda and Pharmacy 2011
[4]. Joshi MG, et al. Evaluation of herbal hand wash formulation; 2008.
[5]. Grace X. F, Sowmya K. V, Darsika C, Polyherbal Hand Sanitizer – Formulation andEvaluation, Indian Journal of Pharmacy and Pharmacology, 2015
[6]. Tortora G. J, Grabowski S. R. Principles of Anatomy and Physiology.10th edition,published by John Wiley and Sons; 2003
[7]. Sunhyo R, Peter I. S, Chang H. S, Hyeonsook C, Yoonkyung P, Colonization and Infection of the Skin by S. aureus Immune System Evasion and the Response to Cationic Antimicrobial Peptides, International Journal of Molecular Science, 2014
[8]. Anionic and Related Lime Soap Dispersants, Raymond G. Bistline Jr., in Anionic Surfactants: Organic Chemistry, Helmut Stache, ed., Volume 56 of Surfactant scienceseries, CRC Press, 1996
[9]. Kareru, P. G., Keriko, J. M., Kenji, G. M., Thiong'o, G. T., Gachanja, A. N., and Mukiira, H. N. (2010). Antimicrobial conditioning of skincare medication from

plant extracts. African Journal of Traditional, reciprocal, and indispensable Medicines

[10]. Warra, A. A. (2013) Soap making in Nigeria using indigenous technology and raw materials, African Journal of Pure and Applied Chemistry

[11]. Kareru, P. G., Keriko, J. M., Kenji, G. M., Thiong'o, G. T., Gachanja, A. N., and Mukiira, H. N. (2010). Antimicrobial conditioning of skincare medication from plant extracts. African Journal of Traditional, reciprocal, and indispensable Medicines

[12]. Warra, A. A. (2013) Soap making in Nigeria using indigenous technology and raw materials, African Journal of Pure and Applied Chemistry

[13]. JanefferLembergMessiasBarboze (2020) Hibiscus Sabdariffa And ResmurinusOfficinalis L. Antibacterial Herbal Soap, International Journal

[14]. Pius A, TariAnyibe (2017) Anti-Microbial Qualities Of AbuadMoringa Soap, Slovat Journal Of Food Science 11(1) 550-557 9. Sk Tiwari, (2020) Gvava And Neem Leaves Extract Herbal Soap, International Journal Of Chemical Studies

[15]. Hari Prasath (2023) Herbal Soap Of Curcuma AmodaRoxburgh And PronutDoluis Asian Journal Of Pharmaceutical And Clinical Research

[16]. DeepthiInakaUluwaduge (2020) Herbal Soap Using Medicinal Plant, International Journal For MultiDisciplinary Research 14 October 2020