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Research Article

A Review on Novel Approach to Personal Hygiene

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Abstract

Bacterial skin infections are most common amongst people, taking significant attention for treatment and to maintain healthy skin. Some herbal factory excerpts have antiseptics and exertion. The paper detergents were most constantly used hand marshland medication in this composition formulate poly herbal paper cleaner with combination of almond and neem and estimate their parameter. The study showed that the tested paper detergents held may be antimicrobial parcels and they can contribute to the treatment and operation of skin infections caused by bacteria if well set with the applicable factory accoutrements to target specific causative organisms and packaged with applicable directions for use and storehouse. Hand washing with cleaner is important because it's proven to clean hands from origins and bacteria and chemicals which can beget particular detriment or complaint. This is especially important for people who handle food or work in the medical field, but it's also an important practice for the general public.

Keywords: Skin Infections; Antimicrobial Activity; Herbal Paper Soaps

Introduction

The demand for eco-friendly and convenient personal hygiene products has increased significantly in recent years. Polyherbal formulations have garnered attention for their natural antimicrobial, skin-soothing, and cleansing properties. This review focuses on the formulation and evaluation of polyherbal paper soap, combining the therapeutic benefits of herbal ingredients with the convenience of compact, biodegradable paper-based delivery systems.

Key herbs such as Neem (*Azadirachta indica*), Turmeric (*Curcuma longa*), Aloe Vera (*Aloe barbadensis*), and Tulsi (*Ocimum sanctum*) are highlighted for their antimicrobial, anti-inflammatory, and skin-conditioning properties. The formulation process involves incorporating herbal extracts into a dissolvable paper matrix, ensuring effective cleansing while maintaining skin health.

The review also evaluates the physicochemical properties of polyherbal paper soap, including pH balance, solubility, antimicrobial efficacy, and user acceptability. Additionally, the environmental benefits of replacing conventional soap packaging with biodegradable alternatives are discussed.

History of paper soap

The history of paper soap is a tale woven through centuries of innovation, necessity, and cultural exchange. Its origins are rooted in ancient civilizations where cleanliness and hygiene were valued virtues. While it may seem like a modern convenience, the concept of soap in a portable form date back to early civilizations such as the Egyptians, who utilized a combination of animal and vegetable oils with alkaline salts to create soap-like substances.

The evolution of soap-making techniques spread across the ancient world, with the Greeks and Romans further refining the process by incorporating fragrances and medicinal herbs. Soap became an essential commodity traded along the Silk Road, facilitating cultural exchange and spreading knowledge of its production techniques.

Fast forward to medieval Europe, where soap-making guilds emerged, refining the craft and elevating it to an art form. Soap was primarily produced in solid bars or cakes, often reserved for the wealthy or privileged classes. However, with the expansion of trade routes and the rise of mercantile societies, soap gradually became more accessible to the masses.

The Renaissance period witnessed significant advancements in chemistry and medicine, leading to the discovery of new ingredients and techniques for soap production. This era also saw the emergence of scented soaps, catering to the aesthetic sensibilities of the elite.

The Industrial Revolution marked a turning point in the history of soap, as mass production techniques revolutionized the industry. Soap became an everyday commodity, available in various forms and fragrances to suit different preferences.

The 20th century witnessed further innovation in the realm of personal hygiene products, with the introduction of liquid soaps, shower gels, and antibacterial formulations. However, it was during this time that the concept of paper soap began to gain traction.

Paper soap, also known as dissolvable soap sheets or soap leaves, represents a convenient and portable solution to hygiene on the go. Its origins can be traced back to Japan, where it was initially developed as a compact and lightweight alternative to traditional soap bars.

During the post-World War II era, Japan experienced rapid economic growth and technological advancement. Innovations in packaging and manufacturing techniques paved the way for the development of paper soap, catering to the needs of a mobile and fast-paced society.

The popularity of paper soap spread beyond Japan, finding favour among travellers, outdoor enthusiasts, and individuals with active lifestyles. Its lightweight and compact design made it an ideal companion for camping trips, backpacking adventures, and business travel.

As globalization accelerated in the late 20th century, so too did the spread of paper soap to other parts of the world. Countries across Asia, Europe, and the Americas embraced this innovative hygiene solution, incorporating it into their daily routines and travel kits.

Today, paper soap is readily available in a variety of formulations, scents, and packaging options. It has become a staple item in hotel amenities, airline amenity kits, and personal care product lines.

The advent of online retail and e-commerce platforms has further democratized access to paper soap, allowing consumers to purchase it with ease from the comfort of their homes.

In recent years, growing concerns about hygiene and sanitation, particularly in the wake of global pandemics, have led to renewed interest in portable hygiene solutions such as paper soap. Its convenience, efficacy, and eco-friendly packaging make it a preferred choice for individuals seeking to maintain cleanliness and hygiene while on the move.

Figure 1: Paper Soap.

Looking ahead, the future of paper soap appears bright, with ongoing innovation driving the development of new formulations, sustainable packaging materials, and enhanced functionalities. As society continues to prioritize health and wellness, paper soap is poised to remain a ubiquitous and indispensable companion for generations to come.

Common skin diseases

Most common skin diseases are Eczema, Acne, Rashes, Psoriasis, Allergy, dry skin, urticaria etc. [1].

Soaps are cleansing and lubricating products. Soaps are surfactant usually used for washing and bathing and other types of housekeeping [2]. Soaps are used to remove dirt including dust microorganism, strains bad smells from the body [3]. Commercial soap usually are made up of toxic mercury aluminium, barium, bisphenol, plastics and other chemicals, which are absorbed into the body via internal organs from vaporization of the chemicals as well as skin absorption with negative side effects.

Herbal paper soap

Poly herbal paper soap blends the age-old wisdom of herbal medicine with the modern convenience of portable hygiene. It represents a harmonious fusion of botanical extracts carefully selected for their therapeutic properties, encapsulated within dissolvable paper sheets. This innovative approach to personal care combines the healing benefits of various herbs with the practicality of on-the-go hygiene.

The concept of poly herbal remedies has deep roots in traditional medicine systems practiced across cultures worldwide. Drawing upon centuries of herbal knowledge passed down through generations, poly herbal formulations aim to harness the synergistic effects of multiple herbs to promote overall well-being.

In the context of paper soap, poly herbal blends offer a holistic approach to skincare and hygiene. Each herb contributes its unique set of properties, ranging from antibacterial and antifungal to soothing and moisturizing effects. The combination of these botanical extracts creates a multifunctional soap that not only cleanses the skin but also nourishes and protects it.

In conclusion, poly herbal paper soap represents a harmonious blend of ancient herbal wisdom and modern innovation. Its holistic approach to skincare and hygiene provides a refreshing and rejuvenating cleansing experience, while its practicality makes it an essential companion for those leading active lifestyles. Whether at home or on the go, poly herbal paper soap offers a natural and eco-friendly solution for maintaining healthy, radiant skin.

Importance of herbal paper soap

Herbal paper soap is gaining popularity for its combination of convenience, portability, and natural benefits. It combines the traditional function of soap with the benefits of herbal ingredients, making it a versatile product with several important advantages.

Convenience and portability

- **Lightweight and Compact:** Herbal paper soaps are typically small, flat sheets of soap that dissolve when they come into contact with water. This makes them easy to carry around, especially when traveling, hiking, or going to the gym.
- **No Spillage or Mess:** Unlike liquid soaps or bar soaps, herbal paper soap won't spill or get messy, making it ideal for on-the-go use.
- **Single Use:** Each sheet is usually intended for one wash, ensuring hygienic and controlled use.

Natural ingredients

- **Herbal Formulas:** Herbal paper soaps often contain plant-based extracts like aloe vera, neem oil, almond oil, rose water and others. These natural ingredients offer skincare benefits such as moisturizing, soothing, and antibacterial properties.
- **Gentle on Skin:** Herbal soaps are less likely to cause skin irritation compared to synthetic products because they do not contain harsh chemicals or artificial fragrances.
- **Eco-friendly:** Many herbal paper soaps are made with biodegradable ingredients and packaging, contributing to a reduction in plastic waste.

Skin benefits

- **Cleansing and Nourishing:** Herbal ingredients can provide deep cleansing while also nourishing and hydrating the skin. For instance, aloe vera helps soothe dry skin, and neem oil has antibacterial properties.
- **Suitable for Sensitive Skin:** Since herbal paper soaps usually contain fewer chemicals, they are less likely to irritate sensitive skin, making them ideal for people with allergies or skin conditions like eczema.

Environmentally friendly

- **Minimal Packaging:** Paper soaps are often sold in compact, eco-friendly packaging, reducing the environmental impact of plastic bottles commonly associated with liquid soaps.
- **Sustainable Ingredients:** Many herbal paper soaps use sustainably sourced ingredients, contributing to more ethical and environmentally conscious consumer practices.

Cost-effective

- **Economical Usage:** Because the paper sheets are small but potent, they can be more cost-effective in the long run. Consumers only use what they need, leading to less wastage.

Versatility

- **Use for Various Applications:** Besides being a hand soap, herbal paper soaps can also be used for face and body washing, making them versatile.
- **Travel-Friendly:** Due to their compact nature, they are perfect for travelers who want to minimize baggage and avoid the hassle of liquid regulations at airports.

Hygiene

Herbal paper soap offers a hygienic solution to handwashing, especially when access to traditional soap and water is limited. Whether traveling, camping, or in public spaces, herbal paper soap provides a convenient way to maintain cleanliness and prevent the spread of germs.

Innovative and trendy

- **Appealing to Eco-Conscious Consumers:** As consumers increasingly seek sustainable and natural products, herbal paper soaps appeal to those who prioritize eco-friendliness, health, and natural beauty.

In summary, herbal paper soaps offer a convenient, skin-friendly, eco-conscious, and cost-effective solution for personal hygiene, all while incorporating the healing properties of natural herbs.

Uses of herbal paper soap

Herbal paper soap serves a multitude of purposes, thanks to its versatile nature and convenient format.

Hand washing

The primary use of herbal paper soap is for hand washing. Whether at home, in public restrooms, or while traveling, herbal paper soap provides a convenient and hygienic solution for cleansing hands and removing dirt, bacteria, and germs.

Face washing

- **Gentle Facial Cleansing:** Many herbal paper soaps are formulated with mild, skin-nourishing herbs such as chamomile or lavender, which are great for gentle facial cleansing. They help remove dirt, excess oils, and impurities while providing hydration and soothing the skin.
- **Suitable for Sensitive Skin:** Herbal paper soap is usually free of harsh chemicals, making it ideal for sensitive or acne-prone skin. The natural ingredients can provide antibacterial or calming effects on the skin.

Emergencies

Herbal paper soap is a valuable item to include in emergency kits and survival gear. In situations where access to clean water is limited or compromised, herbal paper soap provides a means to sanitize hands and reduce the risk of illness.

Sensitive skin

Individuals with sensitive skin or allergies may benefit from using herbal paper soap. Unlike conventional soap products that may contain harsh chemicals or fragrances, herbal paper soap is often formulated with natural ingredients that are gentle on the skin.

Public spaces

Herbal paper soap is useful in public spaces where hand washing facilities may be scarce or inadequate. Whether at festivals, outdoor events, or public restrooms, herbal paper soap offers a convenient and sanitary option for maintaining hand hygiene.

Skin cleansing

In addition to hand washing, herbal paper soap can be used for overall skin cleansing. Its gentle formula and natural ingredients make it suitable for use on the face, body, and even delicate areas.

Body washing

- **Convenient shower companion:** Herbal paper soap can also be used for a quick shower or bath. The soap sheets dissolve easily when mixed with water, creating a lather that can cleanse the body while delivering the benefits of herbs such as tea tree oil or aloe vera.
- **Travel-Friendly body soap:** Instead of carrying bulky soap bars or liquid shower gels, herbal paper soap sheets are an efficient way to stay clean while traveling, ensuring no mess and no extra weight in your luggage.

Foot care

- **Refreshing Foot Wash:** The antibacterial and antifungal properties of herbal ingredients like peppermint or neem are beneficial for foot care. Herbal paper soap can be used for a quick and refreshing foot wash, especially after long days of walking or standing.
- **Relieving Foot Odor:** Ingredients like tea tree oil or eucalyptus help to eliminate odor-causing bacteria, keeping your feet fresh.

Quick cleaning for hands or skin

- **Emergency Cleaning Solution:** In situations where soap and water are not readily available, herbal paper soap can be a lifesaver. Simply carry a few sheets in your bag for a quick, hygienic way to clean your hands, face, or other areas of the body.
- **No Need for Additional Water:** Some herbal paper soaps, especially those infused with moisturizing herbs, can be used without the need for a large amount of water, which is especially useful in outdoor situations or during travel.

Camping or hiking

- **Outdoor Hygiene:** Herbal paper soap is ideal for camping or hiking where space and water might be limited. It's lightweight, compact, and easy to carry, allowing you to maintain hygiene in the wilderness without bringing bulky bottles of soap.
- **Eco-friendly:** Since it's biodegradable, herbal paper soap is an environmentally friendly option for outdoor use. It won't pollute the environment when washed off in natural surroundings.

Collection of plants material

Neem were collected from local botanical garden. Irrespective of the type of crude drug and area of collection, there cannot be opinions that drug are collected suitably when they contain maximum concentration of active ingredients.

The following are a few of the main active ingredients in Formulation of Herbal Paper Soap.

Neem oil

Figure 2: Neem seed (*Azadirachta indica*).

It is suggested to be an antibacterial, anthelmintic, antiviral, anticancer and more importantly Immunomodulatory agent. Neem has an anti-inflammatory property which helps reduces acne. *Azadirachta indica* also helps reduce skin blemishes. Neem is a rich source of Vitamin E which help repair damaged skin cells.

Name of Active ingredient: Azadirachtin

- **Chemical Formula:** C35H44O16
- **Phytochemicals:** Limonoids, flavonoids, phenols, catechins, gallic acid, polyphenols, nimbins
- **Molecular weight:** 720 g/mol
- **Melting point**: 160°C
- **Solubility:** 0.1 mass % of polysorbate-80.

Molecular structure

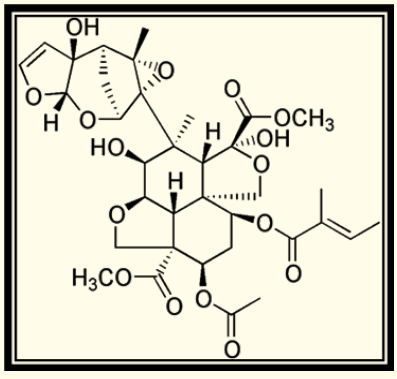


Figure 3: Structure of Azadirachtin Formulation and Evaluation of Polyherbal Paper Soap.

Almond oil

Figure 4: Almond oil.

Expressed almond oil is an emollient and an ingredient in cosmetics. Almond oil is used as a laxative, emollient, in the preparation of toilet articles and as a vehicle for oily injections. The volatile almond oils are used as flavoring agents.

Name of Active ingredient: Oleic acid

- **Chemical Formula:** C18H32O2
- **Phytochemicals:** Kaempferol, naringenin, vanillic acid, caffeic acid and ferulic acid.
- **Melting point:** -5 to -15°*C*
- **Solubility:** Slightly soluble in alcohol, miscible with petroleum.

Molecular structure

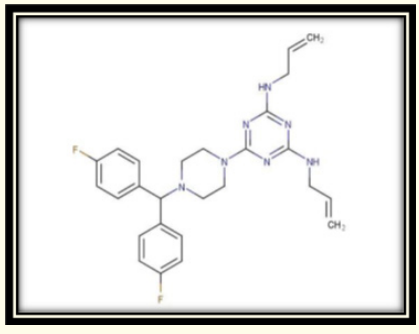


Figure 5: Structure of Oleic acid.

Curcumin

Figure 6: Curcumin.

It is a highly pleiotropic molecule that exhibits antibacterial, anti-inflammatory, hypoglycemic, antioxidant, wound-healing, and antimicrobial activities.

Name of Active ingredient: Curcumin

- **Chemical Formula:** C21H20O6
- **Phytochemicals:** Diferuloylmethane, demethoxycurcumin and bisdemethoxycurcumin
- **Molecular weight:** 368.385 g/mol
- **Melting point:** 183 °*C*
- **Solubility:** Quite soluble in organic solvents.

Molecular structure

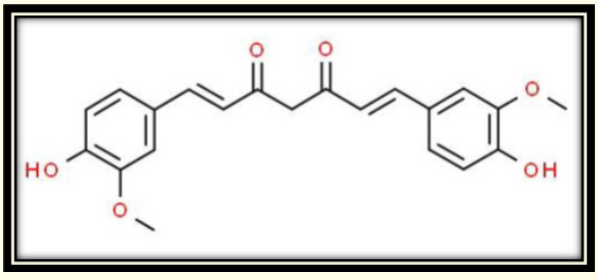


Figure 7: Structure of curcumin.

Aloe vera

Figure 8: Aloe vera.

Skin injuries healing affected by burning, skin irritations, cuts and insect bites, and its bactericidal properties relieve itching and skin swellings.

Name of Active ingredient: Aloin and emodin

- **Chemical Formula:** C16H13NO3
- **Phytochemicals:** anthraquinones, flavonoids, tannins, sterols, alkaloids, and volatile oils
- **Molecular weight:** 267.279 g/mol
- **Melting point:** 148-150 °C
- **Solubility:** Soluble in water, slightly soluble in alcohol.

Molecular structure

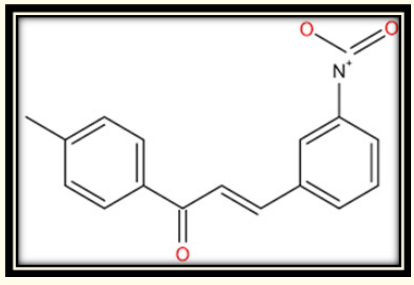


Figure 9: Structure of Aloe vera.

Sodium lauryl sulphate

Figure 10: Sodium lauryl sulphate.

It is an anionic surfactant used in many cleaning and hygiene products. This compound is the sodium salt of the 12-carbon organosulfate. Its hydrocarbon tail combined with a polar "head-group" give the compound amphiphilic properties that make it useful as a detergent. SDS is also component of mixtures produced from inexpensive coconut and palm oils. SDS is a common component of many domestic industrial and commercial cleaning and product formulations.

Name of Active ingredient: Sodium lauryl sulphate

- **Chemical Formula:** C12H25NaSO4
- **Appearance:** White or cream coloured solid
- **Molecular weight:** 288.372 g/mol
- **Melting point:** 206 °C
- **Solubility:** Highly soluble in water

Molecular structure

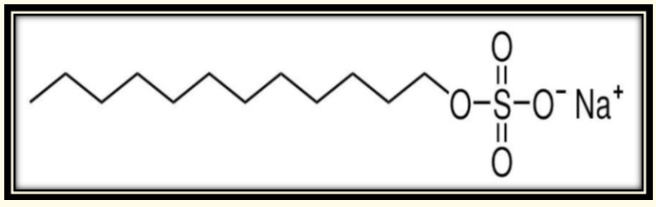


Figure 11: Structure of Sodium Lauryl Sulphate.

Uses

SLS is used as a surfactant in shampoos and toothpastes. SLS also has microbicidal activities against both enveloped (Herpes simplex viruses, HIV-1, Semliki Forest virus) and nonenveloped (papillomaviruses, reovirus, rotavirus and poliovirus) viruses, although it has not been approved for this use.

Excipient profile

Glycerol

Glycerol also called glycerin or glycerin, is a simple triol compound. It is a colorless, odorless, viscous liquid that is sweet-tasting and non-toxic. The glycerol backbone is found in lipids known as glycerides. It is also widely used as a sweetener in the food industry and as a humectant in pharmaceutical formulations. Because of its three hydroxyl groups, glycerol is miscible with water and is hygroscopic in nature.

Name of Active ingredient: Glycerol

- **Chemical Formula:** C3H3O3
- **Appearance:** Colourless or pale yellow
- **Molecular weight:** 92.094 g/mol
- **Melting point:** 17.8 °C
- **Solubility:** Very soluble in water

Figure 12: Glycerol.

Uses: Glycerine uses for Skin Care -

- Reduce Acne. We all have suffered from acne once in our life. ...
- Anti-ageing treatment. ...
- Dry Skin. ...
- Heal Skin. ...
- Safe. ...
- Protects. ...
- Reduce Dullness.

White petroleum jelly

Petroleum jelly is a thick mix of mineral oils and waxes that appears as a semi solid jelly-like substance. Petroleum jelly is widely used as a skin care product, a lubricant, and also as a treatment for minor cuts and burns.

Name of Active ingredient: Petrolatum

- **Chemical Formula:** C15H15N
- **Appearance:** White
- **Molecular weight:** 209.2863 g/mol
- **Melting point:** 70-80 °C
- **Solubility:** Insoluble in water

Figure 13: White petroleum jelly.

Uses

This medication is used as a moisturizer to treat or prevent dry, rough, scaly, itchy skin and minor skin irritations (such as diaper rash, skin burns from radiation therapy). Emollients are substances that soften and moisturize the skin and decrease itching and flaking.

Rose water

Rose water is a liquid made from water and rose petals. It is used as a perfume due to its sweet scent, but it has medicinal and culinary values, as well. There is a long tradition of rose water being used in medicine, including in Iran and other parts of the Middle East, as far back as the 7th century.

Name of ingredient: Rosa Damascena Flower water

- **Chemical Compositions:** Phenethyl alcohol, citronellol and geraniol pH: 4 - 4.5
- **Appearance:** Clear and colourless
- **Viscosity:** Low

Uses

It is a hydrating ingredient that comes with a fragrance that exudes richness. It also exhibits anti-aging properties that fight fine lines and wrinkles on the skin. It also has antimicrobial and antioxidant properties that improve the shelf lives of cosmetic products.

Stearic acid

Is a saturated fatty acid with the chemical formula $C_{18}H_{36}O_2$. It is a common ingredient found in a wide variety of personal care, cosmetic, and industrial products due to its emulsifying, thickening, and surfactant properties. Here's a detailed overview of stearic acid, including its uses and benefits.

Properties of stearic acid

Physical characteristics

- **Appearance:** Stearic acid is typically a white, waxy solid at room temperature.
- **Melting Point:** It has a melting point around 69–70°C (156–158°F).
- **Solubility:** Stearic acid is poorly soluble in water but soluble in organic solvents like alcohol, ether, and chloroform.

Source

Stearic acid is naturally derived from animal fats (like tallow) and plant oils (such as cocoa butter and shea butter). It is often produced commercially from the hydrogenation of unsaturated fats.

Figure 15: Steric acid.

Uses of stearic acid

In cosmetics and personal care products

- **Emulsifier:** Stearic acid helps mix water and oils in creams, lotions, and soaps, stabilizing the product and improving its texture. It creates smooth emulsions in moisturizers, body lotions, and other skincare products.
- **Thickening Agent:** It is used to increase the viscosity of formulations, helping to create thicker, more stable creams and lotions.
- **Cleansing Agent:** In soap-making, stearic acid contributes to creating a rich lather and helps maintain the soap's firmness.
- **Conditioning:** Stearic acid can act as a conditioning agent, providing a soft, smooth feel to the skin and hair in products like hair conditioners and shampoos.
- **Preventing Greasiness:** It helps to reduce the greasy feeling in moisturizers or cosmetics, making them more pleasant to apply.
- **Soap and Detergent Manufacturing:** Stearic acid is an essential component in soap-making, contributing to hardness and structure. It is used in the production of both bar soap and liquid soap.

Material and Methods

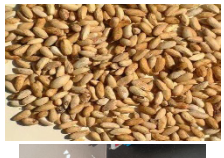
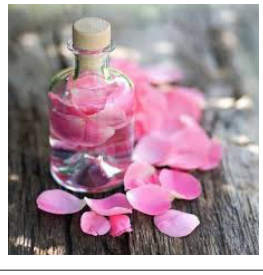
S.N.	Ingredients	Chemical Constituents	Process of Extraction/ Collection of Raw Material	Image
1	Glycerine Soap Base	The soap base available at Soap Making Resource is 100% all natural and is, SLS free, detergent free, paraben free, alcohol free and cruelty free. It's the best stuff on the marke.	It was purchased from pansari natural Product pvt Ltd.	
2.	Almond Oil	Almonds contain lipids (around 50%), proteins (around 25%) and carbohydrates (around 20%) and have a low moisture content and diverse minor bioactive compounds.	Natural badam oil	
3.	Neem oil Extract	Oleic Acid (C18:1): 40-50% Linoleic Acid (C18:2): 10-20% palmitic Acid (C16:0): 10-15% Stearic Acid (C18:0): 10-15%	Soxhlet extraction/and collection from the neem tree seed	  
4.	Rose Essence	Rose oil (rose otto, attar of rose, attar of roses, or rose essence) is the essential oil extracted from the petals of various types of rose. Rose ottos are extracted through steam distillation. being used more commonly in perfumery.	Natural rose essence (purchasing by market)	

Table 1

Method for preparation of Polyherbal paper Soap

Extraction

Neem

100 g of neem seed powder was placed into the thimble and placed in the Soxhlet chamber.500 ml of named detergents were placed in a round bottom beaker and assembled for Soxhlet extractor also the distillation process was begun. After completed the birth process, the detergent and extractor were placed on water bath to dematerialize the detergent. also uprooted neem oil painting were counted.

Figure 16: Neem seed.

Figure 17: Soxhlation method of extraction.

Method

The curcumin(turmeric) extract and combinations of other ingredients like neem oil painting oil, Almond oil painting oil, Aloe vera, Citric acid, Fuller's earth, Glycerine, Rosewater were added in water and sodium lauryl sulphate along with incense stirred well and both the contents were mixed together fully and the volume

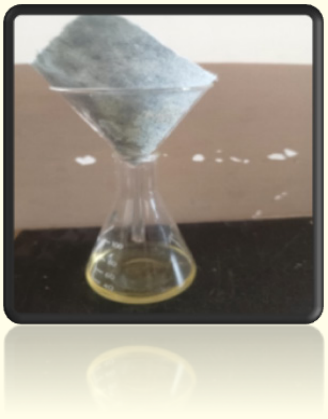


Figure 18: Filtration of neem extraction.

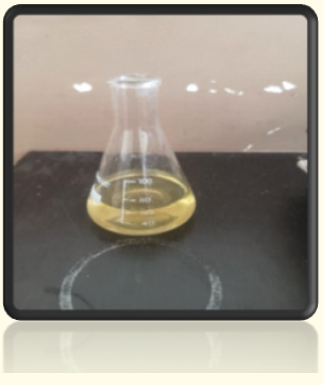


Figure 19: Neem oil.

was made up And warm the semi solid liquid and we added white petroleum jelly and shaking some times and A4 size adulation paper on spread. After that drying paper some time and cut the paper in size also covered to pack for the development of poly herbal paper cleanser strip.

Figure 20: Prepare sls solution.

Figure 21: Worm semisolid soap.

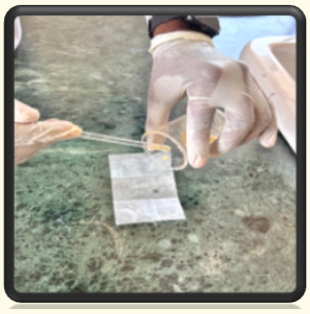


Figure 22: Deep and spread soap.

Figure 23: Paper soap.

Evaluation

Evaluations done by various parameters like physicochemical, pH foam height, form retention, Sensitivity, Irritation and Paper spread ability were performed to establish quality of the prepared paper soap strip.

Physical appearance

- **pH:** The pH of set paper cleaner strip phrasings was determined by using digital pH meter. The phrasings were dissolved in 100 ml of distilled water and stored for two hours.
- **Foam Height:** gm of sample of cleaner was taken dispersed in 25 ml distilled water. also, transferred it into 100 ml measuring cylinder, volume was making up to 50 ml with water. 25 strokes were given and stand till waterless volume measured up to 50 ml and measured the froth height, above the waterless volume.
- **Foam Retention:** 50 ml of the 1 liquid of paper cleaner result was taken into a 250 ml graduated measuring cylinder. The cylinder was covered with hand and shaken 10 times. The volume of froth at 1- nanosecond intervals for 4 twinkles was recorded.
- **Sensitivity:** It's tasted by "patch test. Apply product on 1 cm patch of skin, if no any inflammation or rashes also it considered as free from perceptivity.
- **Skin Irritation:** It's carried out by applying product on the skin for 10 twinkles. If no vexation also it's considered as no vexation product.
- **Paper Spread Capability:** A pinch of product should be fluently spread ability on paper.

Sr. No.	Ingredients	Quantity taken	Role
1.	Glycerine soap base	10 gm	Binder
2.	Stearic acid	2 gm	Stabilizer
3.	White petroleum jelly	10 gm	Moisturizer
4.	Rose essence	q.s.	Perfume
5.	Glycerine	14 ml	Moisturizer
6.	S.l.s.	8 gm	Surfactant and detergent
7.	Neem oil	8 ml	Antibacterial
8.	Curcumin extract	3 ml	Anti-inflammatory
9.	Rose water	20 ml	Toner
10.	Almond oil	7 ml	Anti-aging
11.	Aloe vera	10 gm	Soothing sunburns

Table 2: Composition of polyherbal paper soap.

Sr. No.	Parameter	Test
1.	Color	By Visually
2.	Odour	By Smell
3.	Texture	By Touch

Table 3

Result

Various physicochemical parameters which are mentioned below were performed to establish quality of the prepared formulation.

Physical appearance in different formulation

S. N.	Parameter	F1	F2	F3
1.	Color	Light green	Light green	Green
2.	Odour	Pleasant	Pleasant	Light pleasant
3.	Texture	Less smooth	Smooth	Very smooth

Table 4

Determination of pH in different Formulation

S. N.	Formulation	Ph
1	F1	6.13
2	F2	6.80
3	F3	6.87

Table 5

Discussion

The present research mainly focused on the formulation and evaluation of polyherbal paper soap using various evaluation parameters. hence this formulation was easily washed with normal water after application. The prepared formulation had a good spread ability.

Viscosity and pH of the soap was in range. The polyherbal paper soap was non-greasy in nature and easily removable after application. The formulation was non-irritant and is not harmful to the skin [4-50].

Conclusion

The incorporated herbs such as the neem seed oil of *Azadirachta indica* and curcumin have antibacterial, anti-inflammatory.

Antibacterial activity

Formulation of polyherbal paper soap was done by method and further evaluated by various evaluation parameters such as physical properties, pH, non-irritancy test, of soap gave quite good results.

The present experimental study showed that it is possible to develop and evaluate polyherbal paper soap with herbal extract for anti- microbial activity.

In conclusion, from the set herbal paper cleaner strips, the strips of A4 size adulation paper shows the stylish results as compared to other named papers. The herbal cleaner strip show excellent release within 15 twinkles indicating good effectiveness and penetration. The set herbal cleaner strips are accessible to use and new type of useful the all periods and coitus. Herbal paper cleaner is a veritably good effects that used in travelling. Herbal paper cleaner is of chemical free, it's a veritably handy effects and is small. currently, The use of paper cleaner is veritably high that reason but there's no loss of herbal paper cleaner. Herbal paper cleaner veritably fluently to carryout in chirrs. The detailed concluding reflections are as under which primarily reflects the conclusion of colourful authors maintained in their studies. Ayurveda is one of similar inherited tradition of health and life. A wide variety of shops have been set up to have effective against number of optical conditions. The process of making paper cleaner is performed by spreading material on A4 size adulation paper shows the stylish results as compared to other named papers. Formulated paper detergents was estimated for physicochemical, pH froth height, form retention, perceptivity, vexation and Paper spread capability and the attained results were in the respectable limits. The formulated liquid cleaner containing turmeric, Neem oil painting, Almond oil painting, Aloe vera was set up to be easier and simpler, to produce stable paper cleaner. It's also having accepted range of antimicrobial efficacity which may act as volition of the liquid cleaner and veritably fluently to carryout in chirrs containing synthetic antimicrobial agent.

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