

Review on Polyherbal Paper Soap

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Abstract: *In this composition, paper soaps are commonly used as hand wash products, which led to the development of a polyherbal paper cleaner and the testing of its features. The aim of this product is to create a disposable hand wash in the form of paper. The paper soaps discussed here are among the most commonly used hand cleaning items, which inspired the making of a polyherbal paper soap and the testing of its properties. Washing hands with soap is important because it helps get rid of germs, bacteria, and harmful substances that can cause illness or harm. This is especially important for people who work with food or in healthcare, but it is also necessary for everyone in the community. Polyherbal paper soap is a new and creative product that combines the ease of using soap with the natural benefits of herbal extracts. It is a type of soap made from a mix of several herbal ingredients. Paper soap comes in thin sheets or strips made from soluble paper or similar materials. It is a handy and portable form of soap that can be used for washing hands or keeping clean Keeping when regular soap and water are not available.*

Keywords: Polyherbal paper soap, the ingredients used in it, the other substances added, how the paper soap is made, and the tests done to check its quality

I. INTRODUCTION

Cleaning things is really important because more people are getting sick from bacteria and where they come from.[1] A cleanser is a product you mix with water to clean and make things tidy. It is made by combining natural oils or fats with sodium hydroxide or another strong base, and often has added scent and color. Today, cleansers are not just for cleaning to keep skin healthy; some also help make skin softer or create foam.[2,3] When making a cleanser, different kinds of fats and oils are commonly used as the main ingredients. The type of oil you use depends on what purpose the cleanser is meant to serve.[4] Cleanser is used for. A key ingredient for facial cleansing, this substance is an alkaline chemical that comes from long-chain fatty acids. [5] The fats and oils most often used in making cleaning products through a process called saponification include animal fat, coconut oil, palm oil, castor oil, and linseed oil. Also, potassium and sodium hydroxides are commonly used as the alkaline materials in this process. [6] A paper anywhere cleaner is a type of cleaning solution that is light and dries quickly, mixing easily with just a little water in a few seconds. This cheap and small product is good for cleaning hands and face. [7] People look for hand-washing soap that is easy to take with them. Paper soap is an innovative product that is as thin as paper. When it touches water, it dissolves and turns into a cleaning agent. Paper soap is usually used once because it is small and light, making it easy to carry and perfect for outdoor activities. [8] Paper cleaner is a thin cleaning agent. It acts as an anionic surfactant that mixes with water for washing and cleaning. Nowadays, many people prefer herbal options because they are safe and do not cause harmful side effects. That is why we are choosing herbal products and making a herbal paper cleaner. The polyherbal cleaner was made using extracts from sandalwood and orange peel, and it was tested using various assessment methods like sensory characteristics, pH levels, foam height and stability, skin irritation, and resistance to high temperatures. [9]





Fig No.1 Marketed Paper Soap

Advantages of paper soap

- It is light in weight
- It is ready to use right away
- It is gentle on the skin
- It is easy to carry around
- It is good for the environment
- It is affordable
- It breaks down easily in nature and can be composted

Cleanliness is really important because more people are getting sick these days. Soap is a cleaning tool that works well with water to help wash away dirt and germs. It is made by mixing natural oils or fats with sodium hydroxide or another strong base, and it often has a scent and color added for extra appeal. These days, soap doesn't just clean—it also helps keep the skin healthy, with some types especially made to make the skin softer and look whiter.

Soap works because it is a type of surface-active agent, and chemically, it's a salt made from long-chain fatty acids and an alkali metal.

The most common oils and fats used in making soap are animal fat, coconut oil, palm oil, kernel oil, and linseed oil. Potassium and sodium hydroxides are the usual strong bases used in this process.

Paper soap is made into thin, dry sheets that dissolve quickly in a small amount of water.

It's a convenient, small product that's great for cleaning hands and faces when you're on the move. In today's world, paper soap is an innovative product that is as thin as paper. When it comes into contact with water, it turns into foam. It's often used as a disposable option because it is light and compact, making it perfect for outdoor activities.

Currently, soap is made from fats and an alkali.

The cold process is the most popular method for making soap today, although some traditional makers still use the hot process. Paper soap is basically a thin sheet of soap. It functions as an anionic surfactant that works with water to help clean. However, many people now prefer herbal options because they don't have side effects. This has led to the development of herbal products, including herbal paper soap. Polyherbal soap is made with extracts like sandalwood



and orange peel, and its effectiveness is tested based on several factors like its look, pH level, how much foam it makes, how long it lasts, how it affects the skin, and how it holds up under heat.

Paper soap is made into thin, light sheets that dry quickly and dissolve fast when they touch even a little water.

It's a convenient cleaning product that fits easily in your pocket and is great for washing hands and face. Today, many people want a hand-washing soap that is easy to carry around. The innovation of paper soap allows it to be made or printed to look like paper. When it meets water, it turns into a foaming lather. Because it's small and slim, it's often used as a single-use option for hand washing, making it ideal for outdoor activities.

Today, soap is made by mixing fats with an alkali.

The cold process is the most common method used for making soap today, though some artisans still use the traditional hot process. Paper soap is made into a thin sheet. It functions as an anionic surfactant, which is used with water to improve washing and cleaning. However, many people today prefer herbal products because they don't have effects, which is why we are choosing herbal options and making herbal paper soap.

Types Of Paper Soap

- 1) Antibacterial paper soap.
- 2) Herbal paper soap. (with natural extracts)
- 3) Fragrance-free paper soap.
- 4) Moisturizing paper soap.
- 5) Biodegradable paper

Benefits Of Paper Soap

- 1) Not heavy.
- 2) Prepared for immediate use.
- 3) Gentle on the skin.
- 4) Eco-friendly.
- 5) Not very costly.
- 6) Can break down naturally and turn into compost.
- 7) Easy to transport.[12]

Application of polyherbal paper soap:

Sheets are mixed with herbal extracts and essential oils to make polyherbal paper soaps, also called herbal paper soap. It has many different uses and benefits. Here are some possible uses for polyherbal paper soap.

- 1.Traveling and camping: Polyherbal paper soap is great for traveling and camping because it's light, small, and easy to carry. You don't need to bring big bars of soap or liquid soap anymore, and it's easy to throw away after use.
- 2.Public hygiene: Polyherbal paper soap is a useful tool for keeping clean in public places where regular soap might not be available. It can be used in areas where washing hands isn't easy, like airports or train stations.
- 3.Outdoor activities: Polyherbal paper soap can be a good way to keep your hands clean while hiking, biking, or doing other outdoor tasks. It works well with little water or even without any water at all, which makes it very helpful when water is not available.

Poly herbal paper soap is a special, new kind of product that combines the usefulness of soap with the natural benefits of herbal extracts.

This soap is made by mixing carefully chosen herbal ingredients that work together to create a powerful effect.

It's made from soluble paper or similar thin sheets.

When regular soap and water aren't available, it offers a handy and easy-to-carry alternative for hand washing or personal hygiene. Because it can be used in many situations, poly herbal paper soap is a versatile product. It brings the natural goodness of herbal extracts together with the convenience of a portable soap form.



Drug and excipient profile:

1.Reetha



Fig no1. Reetha

Kingdom: Plantae (plants)

Class: Magnoliopsida (dicotyledons)

Order: Sapindales

Family: Sapindaceae

Genus: Sapindus L (soapberry)

Species: Sapindus mukorossi Heart (Chinese)[16]

Chemical constituents:

Reetha (Sapindus mukorossi), also called soapnut, has triterpenoid saponins (6% to 11.5%), sugars (10%), mucilage, and different fatty acids.

These are used traditionally for cleaning and for other health-related uses.



2. Turmeric [17] Kingdom



Fig No.2 Tumeric

Kingdom: Plantae

Subkingdom: Tracheobionta

Order: Zingiberales

Family: Zingiberaceae

Genus: Curcuma

Species: longa

Scientific name: Curcuma longa

Chemical constituents:-

Curcumin, which is called diferuloylmethane, is the main active compound found in Curcuma longa.

There are also two other curcuminoids called desmethoxycurcumin and bis desmethoxycurcumin. Along with these, there are various volatile oils such as tumerone, atlantone, and zingiberone. Other parts of the plant include sugars, proteins, and resins.



3. Aloe vera[18]



Fig No. 3 Aloe vera

Kingdom: Plantae

Order: Asparagales

Family: Asphodelaceae

Subfamily: Asphodeloideae

Genus: Aloe

Species: Aloe vera

Botanical name: Aloe barbadensis miller

Chemical Constituents:

Aloe vera helps skin because it has polysaccharides that keep skin moist, vitamins C and E that protect against damage, enzymes that help remove dead skin, anthraquinones that reduce inflammation, and amino acids that support the production of collagen.





Fig no.4 white petroleum jelly

Petrolatum, commonly referred to as petroleum jelly or Vaseline, has been a well-established skin care remedy that is frequently utilized in beauty and medical applications.[19]

In the pharmaceutical sector, it acts as a

foundation for numerous creams, successfully addressing skin ailments.[20]

ability to seal and promote

healing makes it especially useful for skin that is dry and damaged.[21] Because of its fat-loving characteristics,

Petroleum is an important component in various beauty products. It helps in caring for and shielding the skin

by minimizing friction, stopping moisture from escaping, and serving as a styling product.[22]

It is a widely

utilized material in the fields of beauty products and medicine.[23]

5. Sodium Lauryl Sulphate [SLS][24]

Properties:

Chemical Formula	C ₁₂ H ₂₅ NaSO ₄
Molar mass	288.372 g/mol
Apperance	white or cream colored solid
Odour	Orderless
Density	1.01 g/cm



Uses

Skin Care

1. Hydration: Moisturizes and hydrates the skin.
2. Protection: Shields the skin from environmental stressors, such as UV rays and pollution.
3. Anti-aging: Reduces fine lines, wrinkles, and age spots.
4. Acne treatment: Helps control acne, reduce inflammation, and prevent scarring.
5. Skin tone evening: Evens out skin tone, reducing hyperpigmentation.
6. Soothing and calming: Calms irritated skin, reducing redness and inflammation.

Industrial and practical uses:

Travel-friendly: Compact, lightweight, and easy to carry, making it perfect for travelers, outdoor enthusiasts, and individuals with active lifestyles.

Personal hygiene*: Effective for handwashing, face washing, and body cleansing, especially in situations where water is scarce.

Convenient:: Dissolves quickly

6. Glycerin:

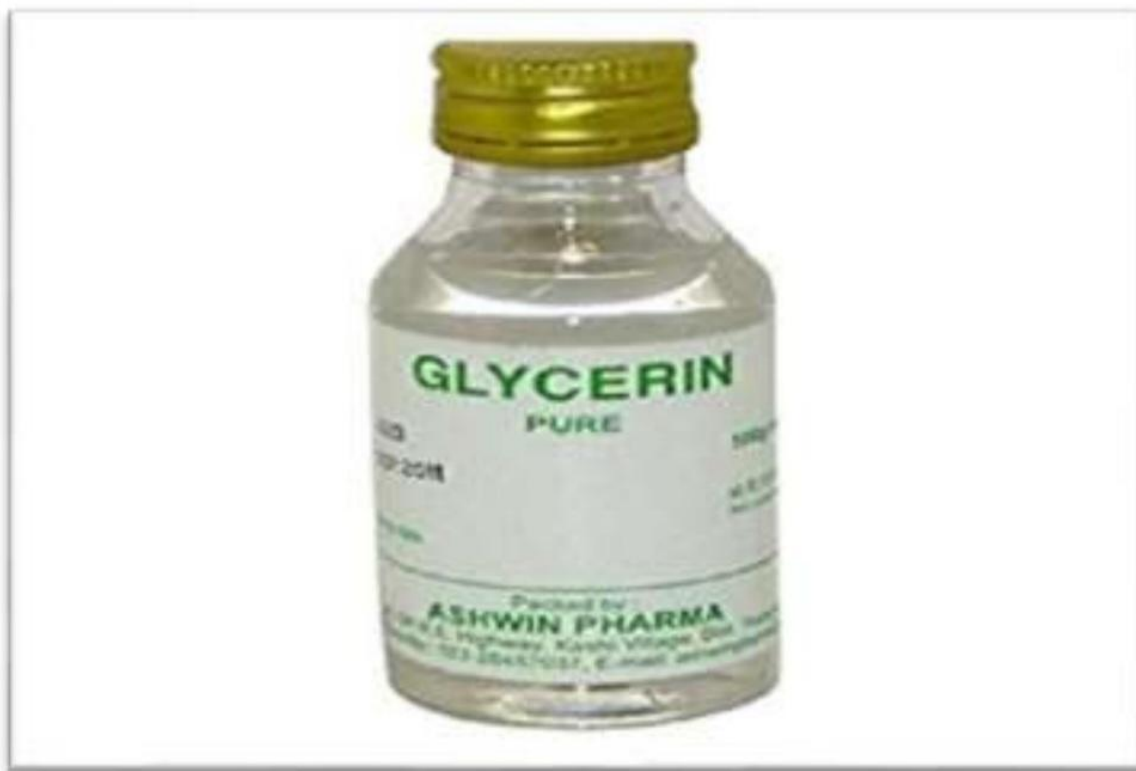


Fig no.6 Glycerin



INTERGIENT USED IN FORMULATION WITH THEIR USES:

Table no-1: Ingredients and their uses

Sr No.	Ingredient	Uses
1.	Reetha	Natural cleansing agent, foaming agent
2.	Turmeric	antioxidant
3.	Aloe vera	Moisturizing, soothing
4.	Sodium lauryl sulfate	surfactant
5.	White Petroleum jelly	Binder
6.	Glycerine	skin softening
7.	Fragrance	Pleasant smell

Glycerin is a common ingredient in polyherbal paper products, including paper soap. Its benefits include:

1. Moisturizing properties: Glycerin helps retain moisture, keeping skin hydrated and soft.
2. Humectant: Attracts and retains moisture, maintaining paper's flexibility and preventing dryness.
3. Skin benefits: Soothes and calms irritated skin, reducing inflammation

Advantages of Paper Soap Production

1. Eco-friendly: Made from natural, biodegradable materials, reducing environmental impact.
2. Portable: Compact and lightweight, making it easy to carry and store.
3. Water conservation: Requires minimal water for production and use.
4. Cost-effective: Can be more affordable than traditional soap options.
5. Customizable: Can be formulated with various herbs, fragrances, and ingredients.
6. Hygienic: Individually wrapped or packaged, maintaining cleanliness and preventing contamination.
7. Convenient: Easy to use, with no need for water or traditional soap dispensers

II. CONCLUSION

Formulated paper soaps were tested for physicochemical properties, pH, foam height, shape retention, sensitivity, irritation, and paper spread ability, and the findings were within the allowed ranges.

Combining the advantages of polyherbal extracts with the convenience of paper soap, polyherbal paper soap is a revolutionary and promising product. We have discussed the several facets and benefits of polyherbal paper soap in this article. Utilizing the advantages of herbal extracts in a practical and environmentally acceptable manner, polyherbal paper soap offers a fresh perspective on personal hygiene. By offering a natural and efficient to keep skin healthy and clean, it may transform the soap market.

Polyherbal paper soap is a revolutionary product that combines the benefits of traditional herbal extracts with the convenience of paper technology. This innovative soap offers a range of benefits, Polyherbal paper soap is a promising product that offers a unique blend of traditional herbal wisdom and modern innovation. Its benefits make it an attractive option for consumers seeking eco-friendly, portable, and skin-friendly products.

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