



# REVIEW ON: POLYHERBAL FACIAL SCRUB

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## ABSTRACT

The main objective of present study was to prepare a Polyherbal scrub incorporated into gel. In today's life for both women and men cosmetics plays an important role to glowing and altering the appearance of skin. The use of natural ingredients to remain healthy and of good appearance the skin surface requires frequent cleansing to remove oil, sebum and other secretions, dead cells, crusts and applied make-ups. Herbal cosmeceuticals usually contain the plant parts which possess antimicrobial, antioxidant and anti aging properties. It is the safest product to use routine with no side. effects and cosmeceuticals are the product which influences the biological function of skin. The prepared gel was evaluated for various parameters such as appearance, pH, viscosity, Spreadability, washability, irritability and found to be satisfied with all required characterizations. Thus, the developed formulation can be used as an effective scrub for using it to bear a healthy and glowing skin..

**Keywords :** Polyherbal ,Skin , Glow, Acne, Moisturizing, Scrub.

## 1. INTRODUCTION

The word cosmetics is derived from the Greek word "kosmos". It describes as objects intended for rubbing, pouring, sprinkling or spraying or presenting on the human body or otherwise any part of the cleansing, glittering, which promotes attractiveness or a cautious appearance. From ancient times the various herbs used to cleanse and purify beauty. Cosmetics are available in different forms and each has its own role to play in the skin. The skin is the largest organ in the body. Provides protection, water conservation, lubricate and regulates temperature. The skin becomes dull, not hot for a variety of reasons and this can be successfully overcome by applying a scrub. There are two types of scrubs that are applied to the skin such as facial scrubs and body scrubs. Oil consumption is high on facial scrubs because they are so bad they remove dead skin cells and exfoliate the skin. The skin is divided into three types such as dry skin, oily skin and sensitive skin. With regular use of scrubs the skin glows or becomes smoother because dead skin cells are removed and thus produce new skin cells. Exposure of the skin to an external agent can be prevented by using topical agents directly on the skin. Make-up such as a face pack, face cream, sun cream and face exfoliant are corrected by combining the right foundation. The scrubs can be applied directly to the skin or applied with a small cosmetic pad. Mild massage is recommended when applying a scrub gel that helps improve blood circulation and increases oxygen supply to the entire surface of the skin. The herbal drug industry in India is probably the oldest medical care system in the world. The history of

herbal medicine in ancient India is so ancient that the ancient form of herbal remedies has even been mentioned in the Vedas, an ancient Indian religious textbook. The ancient methods of traditional healing of Ayurveda and Unani deal with the use of herbs and natural products to address health conditions. In ancient times when Scrub were not manufactured people used to use Panchamrit. In these Curd, Honey, Milk, Ghee, Sugar it Moisturizes the skin, Shows Bleaching effect, Soothing the skin, face and Glowing<sup>[1]</sup>

herbal remedies seem to be new to Western therapists and physicians, the fact is that many prescribed drugs even today contain plant extracts.<sup>[2]</sup> Currently, countries around the world appreciate this type of traditional medicine and Indian herbal medicine is well needed which leads to its rapid growth and proves a growth rate of about 30 percent per year. A tremendous increase in the global demand for herbal remedies, skin care products and even cosmetics has been noted in recent years<sup>[3]</sup>

The skin, which is the most exposed part of our body to germs, needs protection from skin diseases, especially the germs that cause acne. Acne mainly affects people with 85% of the skin problems that young people face today. It may even progress into old age and especially affect areas with severe oil shortages such as the face and neck. Acne is most commonly seen in the presence of seborrhea, inflammatory lesions, comedone, excess sebum production and infection of bacteria such as Propionibacterium acnes, Staphylococcus epidermidis, and Malassezia furfur in the follicles. These microorganisms can therefore be targeted for possible treatment of acne. The use of long-acting antibiotics in treatment makes living organisms more resistant to drugs. This adaptation has many facets and depends on the body's response to treatment and hormonal factors, stress conditions etc. To address this problem, alternative therapies have been studied. Since herbal extracts cannot be used directly for treatment, they were prepared and used as a poly herbal anti-acne face gel. In this study, gels made using Hydroxy propyl methyl cellulose (HPMC) and Carbopol with various concentrations of herbal medicines were tested for their anti-acne and anti-bacterial activity against acne-causing acne.<sup>[4]</sup>

Cosmetics are products used to enhance or change the appearance of the face, fragrance or texture. Facial scrubs are an important part of the skin care process. Facial scrubs are usually a cream-based product that contains small pieces of cleansing that, when applied to the skin, help to smooth out the skin by physically lifting dry, dead skin cells. Facial scrubs are also very effective in keeping the skin on the neck smooth making the cleansing easier. When removing, be sure to look up so that the neck skin is smooth and taut, which will make it easier to use. Facial scrub is an excellent deep cleansing application, which removes skin from all skin types and is especially beneficial for oily skin. All of these neutral face scrubs help to remove dirt, grime, dirt and excess oil. This flexible combination can be used as a face scrub or face mask. Mix with water or give her herbal, apply on face and wash gently. Your skin will feel soft, clean and refreshed. Using a face scrub can make your skin feel beautiful, youthful, and soft and radiant. Unlike ordinary soap or detergent, facial scrubs use small particles, beads or chemicals to remove old skin cells and create new ones and a process known as exfoliation. Facial scrubs were the easiest to use, choose a neutral or chemical scrub that suits the skin, massaged on wet skin for one minute, and then cleansed the skin. Repeat once or twice a week. For all its benefits, making facial scrubs a part of how to care for delicate skin. Skin peeling involves the removal of very old dead skin cells from the outer surface of the skin. Exfoliation is involved in all facial conditions, during microdermabrasion or chemical peels. Skin removal can be achieved by means of machines or chemicals.<sup>[5]</sup>

## 1.1 Benefits of Scrubbing Your Skin:

### 1.1.1 For A Squeaky Clean Skin::

Scrubbing gives you clean skin, free from dirt, oil, and sweat. Actually, the bottles of cleansing milk, face wash and facial cleansers cannot pull out all the dust that accumulates in the pores of your skin. Scrubbing does this job successfully.

### **1.1.2 Frees Your Skin From Flakes:**

Flaky skin gives rise to dry patches. It allows dead cells accumulate over time. Scrubbing your skin can help you deal with flaky skin effectively.

### **1.1.3 Helps In Removing Dead Cells:**

Dead cells make your skin look dull and tired. Scrub them off with a gentle scrub.

### **1.1.4 Adds Glow To Skin:**

Exfoliation can actually make your skin glow.

### **1.1.5 Removes Dark Patches:**

Use of scrub twice a week to get results. It is especially effective on knuckles, elbows and knees.

### **1.1.6 Removes Acne Scars:**

Exfoliation helps in doing away with acne scars.

### **1.1.7 Prevents Ingrown Hair:**

Ingrown hair is a perennial problem and scrubbing is the solution to prevent this problem.

### **1.1.8 For Smooth Skin:**

Smooth skin is the key to a more beautiful you. The scrub will not only make your skin look flawlessly smooth, but will also make it soft and well-nourished.

### **1.1.9 Improves The Texture Of Your Skin:**

Scrubbing your skin gives you clean and smooth skin with an improved texture.

### **1.1.10 Promotes Clear Complexion:**

As soon as the flakes, dead cells, blemishes and accumulated impurities are done away. The scrub has natural skin whitening ingredient, the effect is even better.

## **1.2 Ayurvedic Cosmetology**

Beauty of individual gives feelings of pleasure or satisfaction. It is the desire of every individual either female or male to give pleasure to the sense. Some are beautiful by birth and some want to become beautiful. The association between Ayurveda and cosmetic is gaining importance in the beauty and cosmetic. It is being used in human society from ancient time and now gaining importance in the beautification and to cure the skin ailments. In Ayurveda, the cosmetic preparations are used for worship and for sensual enjoyment in India since Vedic period. An Ayurvedic / herbal cosmetic have growing demand in the world market. Ayurveda always have attracted considerable attention because of their effectiveness and comparatively lesser or no side effects in comparison with other drugs. Ayurveda health care and healing, works on four levels-body, breath, mind and spirit. When these are in perfect harmony, a person radiates with inner and outer beauty. According to Ayurveda, toxic materials inside the body makes a person look unhealthy and his personality weakens. Shodhana (Purification) is the best therapeutic intervention to eliminate body toxins which helps to become disease free and helps to maintain health and beauty. In Ayurveda there are several medicinal plants and mode of applications of their processed formulation for enhancing complexion, treating acne, skin disorders, hair fall, complexion etc. Cosmetics alone are not sufficient for proper skin care, so the addition of active ingredients is necessary to check the damage and ageing of the skin. Recently, herbal cosmetics have gained more popularity and more acceptability among the people than synthetic ones due to their lesser or almost nil side effects. In some cases, synthetic cosmetic products may cause severe damage to human skin as those products may contain harmful chemicals. Natural ingredients like herbs, fruits, flowers, barks, rhizomes, leaves, seeds, spices etc. have been used by both men and

women over the whole world and these ingredients are recognized as the best according to their choice. For this reason, at present times, in skin care cosmetic preparations, these natural ingredients are included directly or their extracts and essential oils are used randomly.<sup>[6]</sup>

### 1.3 Difference between Scrubs with Natural and synthetic Exfoliant

In the Exfoliation process, extraction of superfluous dead cells from the outer surface of the skin is performed. Exfoliation can be achieved by Chemical and Mechanical methods. The mechanical peeling of the skin is done by scrubbing the body with abrasive. Regular skin immersion leads to a natural breakdown of the process resulting in smooth, soft and healthy skin. Skin care offers benefits for Acne vulgaris, pores and wrinkles.

Facial scrubs are cleansing. They usually contain small particles of natural or polymeric ingredients. The scrubs are intended to provide a deep cleansing experience that includes a high degree of skin rejuvenation from scratching with particles. An incomplete list of natural scrubberries includes seeds of many fruits (eg peach, apple, apricot), peanut shells (eg almonds, walnut), grains (eg oats, wheat), and sandalwood. Synthetic sanding particles include polyethylene or polypropylene beads.

In addition to the exfoliant, face scrub usually contains network company oil or cream that is used to hold the suspended exfoliant suspended, as well as a specific type of scent, usually supplied with essential oils that should also promote rest or wellness. .

Facial scrubs contain a wide range of Exfoliants from Natural to Synthetic. There are a variety of exfoliants available on the market such as polyethylene beads and jojoba meal.<sup>[7]</sup>

### 1.4 Difference between Face wash and Face Scrub

The face wash is smooth, usually done with cream. Facial scrubs have some form of grit on them that is used to remove dead skin cells in addition to washing. If you have sensitive skin, most dermatologists recommend using only a face wash, not a scrub.

Facial scrubs can irritate the skin and make it easier to scratch. A face wash cleans the oil / dirt on your face by using chemicals such as soap. Facial scrubs clean the oil / dirt on your face using exfoliants, such as walnut shells or microbeads.

### 1.5 Required Qualities And Characteristics Of Scrubs For Face

The essential considerations in formulating a Scrub are as follows:

- It should be a smooth paste or gel without flocculation or gritty particles.
- It should not have an "earthy" or objectionable odor.
- It should form an adherent coating that can be easily removed by gentle washing.
- It should produce a definite sensation of tightening or a therapeutic tingling or warming.
- It should produce a perceptible modification of skin, hair, or scalp feel.
- It should produce a significant and noticeable cleansing of the skin, scalp, or hair.
- It must be nontoxic, dermatologically innocuous, and appropriately preserved.

## 1.6 Selection of Scrub according to type of Skin

### 1.6.1 Oily Skin

People with oily skin mostly have pimple problems as the extra sebum oil clogs their skin pores. Therefore, you need a face scrub that will not only remove the dead skin cells but also have anti-pimple properties in it. Salicylic Acid is known for its anti-acne benefits. If you have oily skin, you should get a face wash that contains Salicylic Acid or similar anti-acne ingredients.

### 1.6.2 Dry Skin

Those with dry skin can use any face wash that has ingredients suited to remove dead skin cells. Glycolic acid is one such ingredient that removes dead skin cells and flakey skin easily. It is known to be a great exfoliant. Look for a face scrub that has glycolic acid and also provides some moisturizing benefits for your skin.

### 1.6.3 Sensitive Skin

People with sensitive skin should be more careful while choosing their skincare products. If you have sensitive skin, make sure that your face scrub is antibacterial and anti-inflammatory. Propylene glycol has antibacterial and antifungal properties. Turmeric and yoghurt are natural ingredients that offer anti-inflammatory benefits. Sugar scrubs are considered good for sensitive skin. Sugar is a natural skin exfoliant and works great to remove dead skin cells.

### 1.6.4 Combination Skin

Since combination skin is a mix of dry and oily skin, it is a bit tough to choose a face scrub. But experts say that people with combination skin should use a face scrub that would clean the excess oil from the skin without drying it out.

## 2. OBJECTIVE

- To remove Acne and blemishes and add moisture to the skin.
- Gets rid of the problem of dry skin while also providing the skin with much needed nourishment.
- To remove dead cells that can clog your pores.
- It helps in exfoliating your skin.
- To prevent Ingrown Hair.
- Improves the texture of skin.
- provides Smoother skin.

**Table 1. List of Herbs used as Cosmetic Ingredients**

Herbs	Botanical Name	Category
Apricot	<i>Prunus armeniaca L.</i>	Emollient/Moisturizing
Tamarind Peel	<i>Tamarindus indica L.</i>	Exfoliating Agent, Anti-oxidants
Kalonji	<i>Nigella Sativa L.</i>	Anti-bacterial, Anti-fungal
Red Dragon Fruit	<i>Selenicereus Undatus</i>	Anti-oxidants, Natural Moisturizer
Poppy Seeds	<i>Papaver Somniferum</i>	Scrubbing Agent
Wheat Cover	<i>Triticum aestivum</i>	Anti-oxidants, Astringents, Protective
Sunflower Seeds	<i>Helianthus annuus</i>	Photo Protective
Lemon Syrup	<i>Citrus Limon L.</i>	Natural Anti-oxidants
Adas(Masoor dal)	<i>Lens Culinaris</i>	Natural Exfoliator
Green Apple	<i>Malus Pumila</i>	Anti-aging, Anti-oxidant

### 3.1 Apricot

Kingdom: Plantae

Division: Magnoliophyta

Class: Magnoliopsida

Order: Rosales

Family: Rosaceae

Genus: Prunus

Subgenus: Prunus

Species: P. armeniaca

Binomial name: *Prunus armeniaca L.*

Chemical Constituents : Apricot Kernels Contain the toxic Phenylamine derived from Cyanogenic Glycoside Amygdalin and this accompanied by minor amounts of Prunasin.<sup>[8]</sup>

#### 3.1.1 Apricot Benefits For Skin

##### Reducing Wrinkles

Facial scrubs made of apricot kernels promote the growth of new skin by removing the skin of old, dead cells. Because it removes the skin of the injured cells, this peeling action can help reduce the appearance of fine lines and wrinkles.

## Humidity

Some apricot kernels include apricot kernel oil which acts as an emollient. The moisturizing properties of these natural oils help to keep skin cells hydrated while counteracting any drying effects associated with peeling your skin.

## Best Skin Tone

Skin peeling is a major benefit of apricot kernels and can correct poor skin tone by removing damaged skin. They also inhibit pigmentation, producing new, lighter, smaller subterranean skin cells.

## To make the Skin whiter

It is made with a natural exfoliant (apricot kernel) to remove impurities that clog pores and dead skin cells at the top causing dull skin. This allows for natural whiteness. As a rich source of vitamins A, B & C, magnesium, calcium, sulfur and iron; apricots help to rejuvenate the skin faster. The natural oils found in the fruit are easily absorbed by the skin and help to retain moisture from the skin. Apricot pulp not only adds natural light and shine to the skin but also helps in treating a number of skin diseases such as eczema, itching and dryness among others. Apricots are also a rich source of antioxidants that protect the skin from the effects of free radicals and reduce the symptoms of premature aging.

## 3.2 Tamarind

Kingdom: Plantae

Order: Fabales

Family: Fabaceae

Subfamily: Detarioideae

Genus: Tamarindus L.

Species: T.indica

Binomial name: *Tamarindus indica* L.

Chemical Constituents: The aerial parts of tamarind plant have the presence of tartaric acid, succinic acid, and acetic acid, gum, sugar, pectin, tannins, alkaloid, glycosides, sesquiterpenes, and flavonoids.

### 3.2.1 Tamarind benefits of skin

Tamarind pulp contains alpha hydroxy acids (AHA), known for its extraction properties. exfoliating face scrub using tamarind to remove all impurities and impurities from your skin. It helps to cleanse your skin from dead skin cells and leave your skin feeling refreshed. To make this face Scrub one teaspoon of each pulp of tamarind and one teaspoon of sea salt. Then add a spoonful of curd or milk cream and mix well. Gently scrub your face with this face scrub by moving the circle and then wash thoroughly. They open pores, reduce age-related blemishes and blemishes, and keep your skin clean.<sup>[9]</sup>

It also has an anti-aging effect on your skin. Tamarind is full of antioxidants that protect your skin from harmful radicals, and Tamarind also has wound healing properties.

A powerful source of antioxidants, flavonoids and vitamins C and A, tamarind prevents the formation of free radicals. To reduce skin irritation and inflammation with tamarind facial pouches. It is also a good ingredient in lightening the skin tone and reducing dark spots and changing color naturally.

### 3.3 Kalonji

Kingdom: Plantae

Order: Ranunculales

Family: Ranunculaceae

Genus: Nigella

Species: N. Sativa

Binomial name: *Nigella sativa L.*

Chemical Constituents: unsaturated fatty acids like as arachidonic, eicosadienoic, linoleic, linolenic, oleic, almitoleic, palmitic, stearic and myristic acid as well as beta sitosterol, cycloecalenol, cycloartenol, sterol esters and sterol glucosides.<sup>[10]</sup>

#### 3.3.1 Kalonji Benefits of Skin

**Anti-bacterial In Nature.** Natural oils are anti-bacterial and when applied to the skin can prevent acne by fighting skin diseases. A diluted solution of nigella sativa oil can be applied to the skin to reduce the growth of acne.

**Full of Antioxidants** Fats are said to reduce free radicals in the body, which may improve the quality of your skin and hair. Kalonji oil is effective in combating inflammation, leaving the skin feeling younger and healthier.

**Fighting Skin Diseases** Common skin diseases, especially psoriasis and eczema, can be treated by applying oil to your skin. This is because the oil has antibacterial and antifungal properties and can also soothe irritation of the skin, leaving it soft and moist.

### 3.4 Dragon Fruit

Kingdom: Plantae

Order: Caryophyllales

Family: Cactaceae

Subfamily: Cactoideae

Genus: Selenicereus

Species: S. undatus

Binomial name: *Selenicereus undatus*

Chemical Constituents: high content of  $\beta$ -amyirin ,  $\alpha$ -amyirin ,  $\gamma$ -sitosterol , octadecane , 1-tetracosanol, stigmast-4-en-3-one and campesterol.<sup>[11]</sup>

#### 3.4.1 Red Dragon Fruit Benefits for Skin

##### It slows down the aging process

This fruit contains high levels of antioxidants, fights free radicals and helps slow down the aging process. Make a paste of dragon fruit pulp, add yoghurt to it, apply this facial pack once a week and make the skin look younger and smoother.



## Lower the Acne

Dragon fruit can be used topically, this helps reduce acne. It contains vitamin C, a good source of antioxidants, which helps prevent your skin from breaking down and helps keep your skin healthy and radiant. Clean the pulp and grind it into a smooth paste, using a cotton ball to apply to the affected area. This home remedy helps to reduce acne.

## Help protect against free radical damage

The free radical in the skin damages the cells and this causes oxidative stress. This will leave your skin looking dehydrated and dull. This can also cause the skin to age prematurely, but once you start applying this fruit on the skin, this prevents free radicals to prevent the skin from becoming dull.

## All Natural Moisturizer

Dragon fruit is a natural moisturizer, this fruit contains about 80% water and is rich in essential antioxidants for the skin and vitamins. Apply this fruit directly to your skin and you will feel the skin moisturized and soft.<sup>[12]</sup>

## It helps to soothe sunburned skin

This fruit is rich in vitamin B3 which helps to soothe sunburn and provide immediate relief from inflammation, redness and itching caused by heavy ultraviolet radiation. In addition, it protects the skin from harmful rays of the sun.

## 3.5 Poppy Seeds

Kingdom: Plantae

Order: Ranunculales

Family: Papaveraceae

Genus: Papaver

Species: *P. somniferum*

Binomial name: *Papaver somniferum*

Chemical Constituents: Minerals like calcium, iron, phosphorus, magnesium, and potassium.<sup>[12]</sup>

### 3.5.1 Seeds Benefits for Skin

Antioxidants and other essential nutrients in poppy seeds contribute to the health of healthy skin. They help treat inflammation and moisturize the skin. The seeds also cleanse the skin and provide light.<sup>[13]</sup>

## Help Treat Eczema and Inflammation

Poppy seeds are effective in treating eczema due to its high linolenic acid content. Poppy seeds, after soaking in water or milk, can be ground with lime juice to make a smooth dough.

## Moisturize the Skin

The paste made from poppy seeds works as a good moisturizer, giving you a smooth and soft skin. All you have to do is add poppy seeds to a food processor and add milk to it. If you have dry skin, you can also add honey. Grind the smooth paste and apply it all over your face. Relax for 10 minutes and then wash. Doing this once a week will provide the necessary moisture for your skin.

## Help Achieve Clear Skin

A poppy seed scrub can help cleanse your skin, making it look clearer and more flawless. You can prepare face scrubs by mixing two teaspoons of poppy seeds and curd. Apply gently on clean face and

neck with a circular motion, rubbing for 10 minutes. Wipe your face with a cotton ball and wash as usual. This will give you clear skin and a radiant complexion.

### 3.6 Wheat Cover

Kingdom: Plantae

Order: Poales

Family: Poaceae

Genus: Triticum L.

Binomical Name: *Triticum aestivum*

Chemical Constituents: Carbohydrates, Starch, Protein, lipids<sup>[14]</sup>

#### 3.6.1 Wheat Cover Benefits for Skin

##### Act as an Antioxidant

Whole wheat atta contains selenium, an antioxidant, which is essential for the skin to fight infections and the onset of cancer. It also helps prevent skin dryness while keeping wrinkles aside.<sup>[15]</sup>

##### Role of zinc

Whole wheat atta is Zinc-rich flour. An important mineral for the skin, Zinc in flour has healing properties. This mineral material is used by the skin, for its health. Another contribution of Zinc is to control fatty acids in the body. Excessive fat loss leads to rashes, such as acne, on the skin. So a healthy dose of Zinc from wholewatt atta and other food sources, helps the skin stay flawless.

##### It is used in diseases

skin is sensitive, magnesium is able to fight many skin problems, while restoring the body's hormonal imbalances. As magnesium also promotes good sleep and prevents anxiety and depression, it is able to combat two major causes of acne: stress and disturbed sleep.

### 3.7 Sunflower Seeds

Kingdom: Plantae

Order: Asterales

Family: Asteraceae

Genus: Helianthus L.

Synonym: Harpalium Cass.

Binomical Name: *Helianthus annuus*

Chemical Constituents: flavonoids (heliannone, quercetin, kaempferol, luteolin, apigenin), phenolic acids (caffeic acid, chlorogenic acid, caffeoylquinic acid, gallic acid, protocatechuic, coumaric, ferulic acid, and sinapic acids) and Vitamins.<sup>[16]</sup>

### 3.7.1 Sunflower Seeds Benefits for Skin

#### Glowing Skin

Sunflower seeds are a staple for bright and lustrous skin. The seeds are brimming with fatty acids like linoleic, oleic, and palmitic acid, all of which aid in collagen and elastin formation, providing smooth, bright skin. Being rich in nutrients, sunflower seeds provide enough nourishment and moisture to keep our skin soft, supple, smooth, and healthy.

#### Detoxifies the skin

Sunflower seeds have a high-magnesium content. This weeds out bacteria and germs — further flushing out toxins from the body. The powerful anti-bacterial properties have a profound impact on the inside of the body, which results in fewer breakouts, infections, and other skin issues. The antioxidants present in sunflower seeds also mitigate the harmful effects of toxic impurities present in the skin, thereby giving it a clearer appearance. From protecting skin against the harmful effects of the sun, to reducing effects of pollution, sunflower seeds pack quite a punch. It helps in preventing clogged pores, eliminating impurities present in the skin, and giving it an overall brighter appearance.

#### Provides Sun Protection

Another great benefit of sunflower seeds is that it acts as a natural sunscreen and provides excellent sun protection. Additionally, it also helps in repairing skin damage caused by years of UV exposure. The presence of beta carotene, which plays an important role in reducing skin's sensitivity to harmful sun rays.<sup>[16]</sup>



### 3.8 Lemon Syrup

Kingdom: Plantae

Order: Sapindales

Family: Rutaceae

Genus: Citrus

Species: *C. limon*

Binomial name: *Citrus limon* L.

Chemical Constituents: limonene, Alpha-pinene, Beta-pinene, Citric acid

#### 3.8.1 Lemon Syrup Benefits for Skin

**Antioxidant:** Lemon juice naturally contains vitamin C, an antioxidant that can help reduce skin damage and premature aging.<sup>[17]</sup>

**Astringent properties:** Due to the high pH levels, lemon can reduce oil in the skin and reduce inflammation.

**Antifungal:** Lemon juice may contain anti-fungal properties, including the ability to kill fungus types of *Candida* on the skin.

**Lightening of the skin:** Lemons contain powerful acids that make the skin smoother, including age spots and acne scars. However, there are medicinal creams that are more effective than lemons.

**Treatment for acne:** a low pH level such as lemon can help reduce inflammation and oil which may contribute to the formation of acne. In addition, citric acid, a type of alpha hydroxy acid (AHA), can help break down dead skin cells that lead to non-inflamed types of acne such as blackheads.

**Antimicrobial Effects:** Lemons also have antibacterial effects, which can help reduce the bacteria *Propionibacterium acnes* that lead to acne.

### 3.9 Adas ( Masoor dal )

Kingdom: Plantae

Order: Fabales

Family: Leguminosae

Genus: Lens

Species: *L. culinaris*

Binomial name: *Lens culinaris*

Chemical Constitutes: Phenolic acid, Phytic acid, Flavonoids, Saponins

#### 3.9.1 Adas Benefits for skin

##### **It acts as a skin cleanser**

Masoor dal is enriched with many essential nutrients, such as proteins, vitamins, and minerals. Together, they make it an excellent cleansing solution that removes all dirt and grime on the skin. Like a facial pack, masoor dal immerses itself in all dirt and removes dirt by removing it gently.<sup>[18]</sup>

##### **Natural filter**

Exfoliation is a necessary step in skin care, even if it is excessive or completely overlooked. However, when made using soft ingredients and in moderation, it results in softer and smoother skin. Masoor dal acts as an excellent exfoliant when applied to facial pockets.

##### **Remedy to get rid of acne**

Masoor dal face pockets serve as an excellent anti-acne solution. It also deals with blackheads and whiteheads, without removing the skin from its natural moisture and texture.

##### **Treatment of aging**

Not many people know this but masoor dal is an excellent moisturizing and healthy moisturizer in the form of a facial pack, and it strengthens the skin to remove wrinkles and fine lines. It is a natural and gentle remedy for aging.

##### **Light solution**

Masoor daal face pockets not only clean, clean, and nourish, but also act as a natural cleansing agent, only, they are not harsh. These solutions and facial creams reduce scars and work even in acne conditions.

## 3.10 Green Apple

Kingdom: Plantae

Order: Rosales

Family: Rosaceae

Genus: Malus

Species: *M. domestica*

Binomial name: *Malus domestica*

Chemical Constituents: Ethyl Valerate

### 3.10.1 Green Apple Benefits For Skin

#### It is rich in vitamins A, B and C

Raw apples are rich in Vitamin A, B and C, so without protecting the skin from the harmful effects of free radicals; it also helps to keep the skin glowing from the inside out.<sup>[19]</sup>

#### Aging ingredient

Antioxidants, such as Vitamin A, Vitamin C, and phenols found in raw apple juice play a major role in delaying premature aging. Free radicals present in the body cause the early onset of wrinkles, fine lines, and dark spots. Regular use of this rich antioxidant drink can help the body fight these free radicals and control or even better, eliminate the damage.<sup>[20]</sup>

#### Improves Skin Structure

A face mask that combines the use of raw apple can soften your skin deeply and help eliminate the appearance of wrinkles while improving the overall texture of your skin. You can take the help of raw apple juice to improve hydration levels in the skin. It can be eaten or used as a face wash to prevent skin dryness.

#### Nourishing the Skin

Due to its high vitamin content, green apple helps maintain your skin and has excellent white and nutritional effects on your complexion. Packed with various vitamins and minerals, you can add this drink to your skin care plan. Collagen and elastin proteins gain energy, which also improves your complexion by nourishing and healing the skin from the deep.

#### Prevents Skin Diseases

In many cases, malnutrition leaves the skin vulnerable to a variety of skin disorders, including eczema and cancer. Raw apple juice ensures that the skin gets the required levels of nutrients. It also provides protection against various skin issues.

## 4. METHODS

### 4.1 Basic Ingredients Used

A short summary of the typical ingredient used as follows:

- **Surfactants** act as cleansing agents and emulsifiers. There are four main groups of surfactants with different characteristics. Usually, they are used in combination with each other to build appropriate properties into the formulations.

- **Anionic surfactants** have good lathering and detergent properties, which are necessary to remove dirt. As mentioned earlier, natural soaps are anionic molecules as well. Examples for anionic surfactants include lauryl sulfates, such as sodium lauryl sulfate (SLS); laureth sulfates, such as sodium laureth sulfate; sarcosinates, such as triethanolamine lauroyl sarcosinate; isethionates, such as sodium cocoylisothionate; taurates, such as sodium methyl cocoyltaurate; sulfosuccinates, such as sodium dioctyl sulfosuccinate; and more recently the monoalkyl phosphates, such as potassium lauryl phosphate.
- **Cationic surfactants** have a positive charge which makes them attracted to the skin. Therefore, they can be employed as conditioning agents. Examples include amines, alkyimidazolines, alkoxyated amines, and quaternary ammonium.
- **Amphoteric surfactants** are well tolerated and lather well and, therefore, are also often used in facial cleansers as secondary surfactants to help boost foam, improve conditioning, and reduce irritation. Examples include betaines, such as cocamidopropyl betaine; imidazolinium derivatives; amine oxides, such as cocamidopropylamine oxide; and alkyl amino acids.
- **Nonionic surfactants**, such as fatty alcohols; poloxamers; alkylene oxides; polyglucosides, such as lauryl glucoside; amides, such as cocamide diethanolamine (DEA), are very mild; thus, they are commonly used as emulsifiers, conditioning agents, and solubilizers. Their main drawback is that they do not lather particularly well. However, they form a perfect combination with anionics.
- **Solvents** act as cleansing agents as well as provide a vehicle for various formulations. General examples include water (the most commonly used vehicle in emulsions), ethanol isopropyl alcohol, or mineral oil as a non-polar solvent for cleaning purposes.
- **Thickeners** are structuring agents, primarily used for gels, lotions, and creams. They provide appropriate rheological properties for the systems as well as contribute to their stability. include hydrophilic ingredients, such as cellulose derivatives, gums, acrylates, and other types of polymers, as well as waxes for the oil phase.
- **Skin conditioning agents (otherwise known as moisturizers)** counteract the SC-disruptive properties of soaps and surfactants. Examples include glycerin, olive oil, almond oil, mineral oil, silicone oils, waxes, panthenol, and allantoin<sup>[21]</sup>.

## 4.2 Preparation of extract Commonly used methods in the extraction of medicinal plants

### 4.2.1 Maceration

This is an extraction process in which Coarsely Powderd drug material, leaves or stem bark or root bark, are placed inside a container; menstruum is poured up until it is completely absorbed by the drug. The container is then sealed and stored for at least three days. The contents are shaken periodically, and when packaged inside the bottle it must be shaken from time to time to ensure complete release. At the end of the extraction, the micelle is separated from the marc by filtration or separation. Next, the micelle is then separated from the menstruum by evaporating in the oven or over a water bath. This method is simple and very suitable for thermolabile plant materials.

### 4.2.2 Infusion

This is the extraction process like maceration. The medicinal material is ground into a powder, and then placed in a clean container. The solvent of the solvent is heated or cold and then poured over a wooden object, immersed, and stored for a short time. This method is suitable for the extraction of easily soluble bioactive elements. In addition, it is a good way to prepare new releases before use. The solvent-to-sample ratio is usually 4: 1 or 16: 1 depending on the intended use.

### 4.2.3 Digestion

This is an extraction method that involves the use of moderate heat during the extraction process. The extract solvent is poured into a clean container followed by a powdered substance. The mixture is placed over a water bath or oven at a temperature of about 50°C. Heat has been used throughout the extraction process to reduce the viscosity of the extraction solvent and improve the excretion of secondary metabolites. This method is suitable for easily soluble plant material.

### 4.2.4 Decoction

This is a process that involves the continuous release of heat using a certain amount of water as a solvent. The dried, ground, and powdered vegetables are placed in a clean container. The water is then stirred and stirred. Heat is used throughout the process to speed up the extraction. The procedure usually takes a short time usually about 15 minutes. The solvent and solvent ratio is usually 4: 1 or 16: 1. Used for extraction of water soluble and heat stable plant material.

### 4.2.5 Percolation

The equipment used in this process is called a percolator. It is a small cone-shaped glass container that opens at both ends. The dried, ground, and powdered plant is ground into a solvent in a clean container. An additional amount of solvent is added, and the mixture is stored for 4h. Later, the contents are transferred to a percolator and then finally closed and allowed to stand for 24h.

### 4.2.6 Soxhlet Extraction

This process is otherwise known as a continuous heating medium. The apparatus is called Soxhlet extractor made of glass. It consists of a circular bottom flask, a discharge chamber, a siphon tube, and a condenser at the top. The dried, crushed, and lightly sown plant is placed in a bag with a hole made of clean cloth or filter paper and tightly closed.<sup>[22]</sup>

## 4.3 Preparation Of Scrub

The extract was prepared by cold maceration process. All ingredients were ground and kept with water for 72hrs. this was dried and stored in desiccator further use. Weigh all ingredients like Sample 1 having steric acid, mineral oil, lanolin, glycerylmonostearate, acetyl alcohol, propyl paraben, isopropyl myristate, and Sample 2 having coconut oil and propylene glycol, triethanolamine, glycerin, rose water and water. Heat separately on water bath up to 75-80°C. Sample 1 was oil phase heat until all ingredient present were melt completely. Sample 2 was aqueous phase heat at 75-80°C. Add Sample 1 to Sample 2 with continuous stirring; transfer it to mortar triturate thoroughly to form emulsion. Add sodium lauryl sulphate in mortar with trituration. Then add extract and cool it at room temperature to form scrub in cream form.

### 4.3.1 Aqueous Formulary

Water-based scrub products have been on the market for years.<sup>6-9</sup> There are three basic types of liquid formulas: such as adhesives, such as gel and cream or lotion Formulas such as Paste are mainly based on sodium stearate / stearic acid mixtures, which are able to stop abrasive particles. Formor-like formulas are additional anionic surfactant systems. gelling agents to stop abrasives. The type of emulsion is a strong cleaning emulsion, capable of stopping explosive particles.<sup>6-8</sup> Abrasives are used in water-based scrub formulas that include natural shells or seeds, polyethylene beads and pumice. natural or seed floods. include, for example, apricot kernels, almond shell, birch powder, coix seeds, grape seeds, jojoba beads, peach seeds, sunflower ower seeds, walnut shell, watermelon seeds once cottonseed shell. Waxes and other

materials combine orange peel with almond paste. Synthetic abrasives consist of polyethylene powder, nylon powder, polypropylene, cellulose and polystyrene beads. Pumice is a volcano with very simple holes scoria, usually gray in color. It includes holes in the size of capillaries that are organized accordingly, given-to form a fibrous structure. It is produced by evaporation of liquid or plastic mortar. Abrasives are tested on the basis of three factors - hardness, particle size and shape - and should be selected according to the desired performance. Nakahira et al. have developed tools and methods to test these features.<sup>1</sup> Scrubs made of large, strong and irregular abrasives will make the skin feel rough and can cause irritation and sometimes damage. On the contrary, it is soft or abrasives such as powder do not give Adequate massage effect to reduce pressure-on requests. The most appropriate distance hardness from 0.5 to 7 (weight Scales range from 0 to 10, 0 is very heavy and 10 is very heavy very soft) .10 Very good shape it is round, and the best width of the size is from 40-80 Mesh (180 to 420 microns).Special attention should be paid there using natural shells or seed masses because they are easily infected by bacterial pollution. The safest way to prevent it dirt is the removal of these greens building materials before use.

#### 4.3.2 Nonaqueous Formulary

Salt and sugar cloves have recently become very popular in the use of the body, hands and feet. These products are designed to meet consumer custom of cleansing, treating and rejuvenating the reproductive skin all at once. Because salt and sugar dissolve in water, your explosive properties can only be used in waterless formations. fats (including natural ester oils, mineral oils, and / or synthetic oils), glycols and silicone fluids. These are the most common drinks used in an ongoing phase of unconventional integration. Abrasives for salt or sugar can be immersed or suspended in the ongoing phase. Dead Sea salt, sea salt, magnesium sulfate and sodium chloride salts are widely used in this formula. Sea salt, especially Dead Sea salt, contains a large number of essential minerals. Salt formation in the Dead Sea is 31% up to 35% magnesium chloride, 24% to 26% potassium chloride, 0.1% to 0.5% calcium chloride, 4.0% to 6.0% sodium chloride and 26% to 30% shiny water. It has been tested once in a clinic confirmed that Dead Sea salt is effective in the treatment of osteoarthritis, rheumatic discomfort and psoriasis. The size and shape of the salt are important for the proper functioning of the product. The most preferred sizes range from 20-80 Mesh (180-840 microns). Facial scrubs usually use finer particles, while body scrubs have medium particles and scrubs on the feet are larger. Cubic conditions (or normal) are preferred for mild skin irritation and improved mood. When the stabilizing properties of sugar and salt are compared, sugar is found to have certain advantages: sugar is soft and can be made in a variety of colors. On the other hand, sugar is less expensive than salt and has no minerals for therapeutic activity. Therefore, sugar scrubs are not as popular as salt particles.

Oils-based oils: Oils include natural ester oils, mineral oils and synthetic oils. Most of these oils are a triglycerides, which bring good skin tone, moisture and protect the skin. One problem with natural oils is their tendency to become rancid. Antioxidizing agents such as tocopherol (vitamin E), BHT (butylated hydroxytoluene) or benzotriazolyl dodecyl p-cresol are needed to prevent rancidity. In addition, natural winter oils are preferred to prevent overheating in related sedimentation. In oil-based formulas that carry



salt / sugar abrasives, the total oil content is 25% to 40%, and the corresponding salt / sugar levels are 60% to 75%. The specific gravity of these particles is higher than that of oil; thus, they will sink to the bottom of the vessel when they are immersed in the oil. When this happens, the product as a whole will produce two distinct categories. Changing the color of the oil the stage is difficult because most natural oils are yellow or blue. In addition, natural oils do not easily spread everywhere. So the spread of natural fats begins and is often represented in terms viscosity. Simple natural oils (low viscosity) are preferred over heavy natural oils (high viscosity) because they are easy to distribute on the skin surface and do not leave a hard feeling. The preferred viscosity range of oils or oil mixtures is 50-200 cps. It is a sad fact, however, that natural oils (excluding sunflower oil and saffl oil) showing moderate comedogenicity.

It is worth mentioning that mineral oils are colourless, clear and odorless liquids. They are excellent cosmetic emollients because they are inert and do not penetrate into the skin.<sup>[21]</sup>

#### 4.4. EVALUATION PARAMETERS

The prepared face wash gel was evaluated for various parameters as follows.

##### 4.4.1 Colour

The colour of the face wash gel was checked visually.

##### 4.4.2 Odour

The formulation was evaluated for its odour by smelling it.

##### 4.4.3 pH

pH of the prepared gel was evaluated. Small amount of the gel was applied on the pH paper.

##### 4.4.4 Consistency

It was determined manually.

##### 4.4.5 Spreadability

Small amount of the gel was placed on the glass slide and another glass slide was placed on the gel. A wooden weight was placed on it. The time required for the gel to spread and the area was measured. The amount and the area of gel on the glass slide represents the efficiency of spreadability.

##### 4.4.6 Extrudability

Small amount of gel was taken into a collapsible ointment tube. One end closed and the other end kept opened. Slight pressure was applied on the closed side. The time taken to extrude and the amount of gel extruded was noted.

##### 4.4.7 Viscosity

Brookfield viscometer was used to measure the viscosity of gel

##### 4.4.8 Irritability

Small amount of the gel was applied on the skin and kept for few minutes and found to be non irritant.

#### 4.4.9 Washability

Formulations were applied on the skin easily remove by washing with water were checked manually Grittiness The product was checked for the presence of any gritty particles by applying it on the skin.

#### 4.4.10 Foamability

Small amount of gel was taken in a beaker containing water. Initial volume was noted beaker was shaken for 10 times and the final volume was noted.

#### 4.4.11 Grittiness

The product was checked for the presence of any gritty particles by applying it on the skin.

#### 4.4.12 Patch test

Patch testing is well established method for diagnosing the hypersensitivity as well as to determine the potential of a specific substance to cause the allergic action on patient skin. In patch test a small area of skin is exposed to those chemicals in dilute form whose specific effect on skin is to be studied. In patch test reaction of formulation on skin is observed in 2-3 days. polyherbal scrub being cosmetic product we have conducted the patch test for the same on different type of skins like fair, dark, medium dark, medium fair and medium.

### 5. CONCLUSION

The knowledge of medicinal plants used by the people of seems to be well known to its culture and tradition. In the present study we identified many plants used by the people to cure dermatological disorders and as cosmetics. Some of the plants were found to have dual use, both as curative and cosmetic. Quality control test must be carried out for herbal cosmetics. It is assumed to be safe for longer periods of time.

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