

Review on Formulation and Evaluation of Multipurpose Herbal Cream

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Received Date: February 02,2025; Published Date: April 03,2025

Abstract

Herbal cosmetics are products designed to improve the appearance of the face. It can be used to treat a range of skin conditions and offers benefits like moisturizing, nourishing, and brightening, according to a recent study. It aims to create natural medicines for various purposes. Cucumis sativus peels, tea (Camelia sinensis) (green tea), aloe vera leaves, basil leaves (tulsi leaves), honey, turmeric, rose oil, Amla, Orange Peel and neem leaves (neem leaves) are just a few examples of the many materials that can be used to make herbs. Herbal cosmetics are aimed for use while also enhancing appearance. Moisturizers are semi-chemical products that help to improve skin condition. Herbal treatments have multiple benefits over scented medicine. Most skin-improving lotions available today are made of synthetic ingredients, but they also have significant disadvantages, such as being extremely allergic. This herb-based skin lotion is perfect. Developing and testing a herbal moisturizer using glycerin, rose water, vitamin E supplements, and aloe vera gel are among the goals of this study. Examine the pH, viscosity, oiliness, and other properties of the aforementioned plants. Washability, color, and consistency are determined by tactile and visual signals. The herbal cold cream formulation is determined based on a number of factors, including its appearance, homogeneity, stability, pH, and organoleptic qualities. Herbal cosmetics are cosmetics intended to improve a person's looks.

Keywords – Honey, turmeric, Rose Oil, Neem, tulsi, cucumber peel, aloe vera gel, green Tea, Amla, Orange Peel, operational testing, assessment, planning, data analysis, and testing.

INTRODUCTION

Creams are defined as semi-solid externally administered fluids of the type oil in water (o/w) or water in oil (w/o). Cream comes in two varieties: water in oil emulsion and oil in water. The principal purpose of the substance is to remain longer at the location of application when it is applied to the outside or superficial skin layers.

Creams are considered pharmaceutical items since they are manufactured utilizing techniques developed in the pharmaceutical industry. Creams with and without medication are regularly employed to treat dermatoses and other skin conditions. Allopathic, herbal, and ayurvedic creams can be used by people according to the needs of their specific skin conditions. They consist of one or more medication elements that have been dispersed or dissolved in a suitable base.

Depending on the water to oil ratio, the cream may be miscible with water and easily removed, or it may be thick and solid. The most commonly suggested drug is derived from medicinal herbs, which are becoming more common in cosmetology for better appearance. Traditional medical systems evolved over time to protect world health before allopathic medicine was discovered. Its research and therapy have roots on modern biology and chemistry, which is why the latter approach quickly achieved business acceptance and now controls most pain management methods.

Cosmetics can be divided into two categories: target body part (pharmaceutical makeup for teeth, nails, skin, hair, and mouth, etc.) and dose form (creams, powders, soaps, pills, etc.). It is regularly activated by many outside factors. Both endogenous and external factors have a chance to affect this equilibrium. Detergents and Sanitizers for the hand are used. A breach in the skin barrier can lead to many kinds of skin problems. The most common problem is dehydration, which dries up the skin and causes symptoms like irritation, redness, peeling, and cracking, as well as emotions like roughness, stinging, and itching. Moisturizer treatment's goal to maintain the integrity and health of the skin by giving it a healthy appearance. Despite the fact that most moisturizers are marketed as natural, safe, organic, and herbal, they all share the same basic hydrating, absorbent, and emollient properties. Many moisturizers to make their bases. Essentially, dangerous synthetic pharmaceuticals need to be replaced with better natural ones.^[1]

Ingredients of Formulation Rose Oil Synonym Ground Rose, China rose, Rosa Family

Rosaceae Biological Source

Biological Source

The petals of certain Rosa species, particularly Rosa damascena Mill. And Rosa centifolia L. Rose oil is also known for its brightening and toning benefits on the skin. It includes natural ingredients that can help to balance out skin tone and erase dark spots and hyperpigmentation. Additionally, the oil can relax the skin, minimising the visibility of pores and enhancing the skin's youthful, radiant glow.^[2]

Source

Rose petals are used to extract rose oil; Rosa damascena, sometimes known as the Damask Rose, or Rosa centifolia are the most used species. Solvent extraction or steam distillation are typically used in the extraction procedure.

Additional Ingredients

Rose oil is a beneficial ingredient; it is typically combined with other reducing and hydrating substances like aloe vera, chamomile, and shea butter in herbal face creams.

Benefits

Softens, smoothest and moisturizes the skin.

Contains a special type of vitamin A called tretonin.

Helps to repair damaged skin.

Improves the sings of damage to the skin from the sun.



Figure 1: Rose Oil

Turmeric

Synonym

Saffron Indian; haldi (Hindi); Curcuma

Biological Source

Turmeric is the dried rhizome of Curcuma longa Linn.

Family: Zingiberaceae

Chemical Constituents

Curcuminoids (5%) and essential oil (6%).

A face mask made of turmeric might be something you want to try if you want for reducing acne damage. Its anti-inflammatory properties may relax your skin and target your pores. It is also known that turmeric reduces scarring. Using these two methods combined may help your face stop breaking out in pimples.

Brightens Skin

Amla promotes an even skin tone by reducing pigmentation and dark patches.

Deep Cleaning

Amla's astringent qualities tighten pores, helping in skin cleansing, and protect against acne.

Moisturization

Amla's natural oils have the ability to deeply hydrate skin, keeping it smooth and moisturized.

Healing Properties

It reduces inflammation and promotes the healing of small cuts and rashes on the skin.

UV Protection

Its antioxidant qualities aid in keeping the skin from chemicals and sun damage.^[3]



Figure 2: Turmeric

Uses

Turmeric used in india, as a food substance In Ayurveda, it is used as medicine It is used as medicine, in Indian home traditionally **Honey Synonyms** Apis mellifera **Family** Apidae

Biological Source

Honey is a common ingredient in skincare products and is a natural element with potential skin benefits. Raw honey is a good acne treatment because it balances bacteria that live on your skin. Research on anti-acne products has shown that manuka honey works long better than other well-known brands. Honey speeds the healing process of your skin cells.^[4]

Moisturizing Property

Being an organic humectant, honey aids in the skin's ability to hold onto moisture. It keeps the skin hydrated and protects against dryness by absorbing moisture from the surrounding air. It is therefore perfect for creams made for sensitive or dry skin.

Brightening

Over time, honey is recognized for its capacity to gradually decrease pigmentation, dark spots, and acne scars, resulting in a more uniform skin tone.

Non irritating

Because of its mild, natural qualities, honey is generally suitable for most skin types, even those with sensitive skin.

Usage in Herbal Face Creams

Honey is often mixed with other organic components in herbal formulations, such as chamomile, aloe vera, and essential oils, to create a complete skincare solution. It enhances the hydrating and therapeutic properties of herbs and botanicals without introducing artificial chemicals. Honey is typically used in its raw or processed form when added to herbal face creams. It is best used on a regular basis, particularly in treatments meant to soothe, moisturize, or cure skin that is prone acne.



Figure 3: Honey

Benefits

A natural moisturizer Remove blackheads Treat Sunburns Reduce wrinkles Anti-microbial Properties **Aloe Vera Synonyms** Aloe Humilis Blanco, Aloe Indica Royle, Ghritkumari, Musabbar

Biological Source

Aloe is made from the dried juice of aloe plant leaves. Aloe barbadensis, Aloe ferox, and Aloe perryi, **Family**

Asphodelaceae (Liliaceae)

Chemical Constituent

Aloin, which makes up up to 30% of the principal active ingredient in aloe, is a combination of the isomers barbaloin and iso barbaloin.

Common Name

Aloe Vera, True Aloe, Curacao Aloe, Aloe Vera Linne

Aloe Vera's Use in Cosmetics. Aloe vera has been employed in the past to treat infections and burns in hopes to reduce weight. On the other hand, aloe vera has shown to be an essential part of cosmetics as beauty science has advanced. It is a wonder plant for beauty because it includes more than 20 different types of amino acids and sufficient amounts of calcium, magnesium, sodium, and other minerals. This is a basic definition of in beauty. Scratching and Blisters: Aloe vera's anti-itch and blister-healing effects.^[5]

Vitamin C, which has been discovered in aloe vera, creates happy, healthy skin. Aloe vera's part in skin aging is to create collagen and elastin. Some proteins are essential for anti-aging skin. Because acne aloe vera has anti-inflammatory and anti-inflammatory properties, it benefits in the removal of acne scars. Acne creation can be decreased by using a lotion containing aloe vera.

Because aloe vera gel has so many benefits for the skin, it's a common natural ingredient in herbal face creams. This natural aloe vera face cream helps to cure and hydrate skin. It can be used as a moisturizer, a calming post-sun lotion, or at bedtime.



Figure 4: Aloe Vera

Benefits

Help Relieves sunburn Softens the skin Increases wound healing Delayed the natural aging process of the skin Minimizes acne and pimples Removes spots from the face. **Cucumber Peel Synonym** Cucumis sativus L

Biological Source

It is derived from the plant cucumis sativus

Family

Cucurbitaceae

Benefits of Cucumber Peel For beauty reasons As cucumber peel is nutritious, it can't be thrown away. Benefits include help from muscle and bone pain, constipation, colds, and blindness. Cucumber peels are high in fiber and contain minerals like potassium, magnesium, and silica. An essential ingredient for bone, muscular, and muscle protection is silica. We have better skin, eyesight, and skin than this. It benefits the skin. Cucumber peels can improve the skin's internal beauty. Cucumber slices or a face mask appear to help improve the looks of skin that is getting older. In addition, it works well for treating dark circles, acne, big pores, and other skin issues. Reduce the Effects of Sun Tanning Cucumbers might have an almost whitening effect. It helps in erasing your skin's tan. Using the juice from a grated cucumber, you may protect your face from damaging UV rays! It simplifies your mental state. In hot weather, the cooling qualities of cucumbers will comfort your mind and provide you happiness. All you have to do in a teapot is combine bark and water to keep the heat alive.^[6]

Benefits

Skin prone to acne.

Minimizes puffiness and puffiness.



Figure 5: Cucumber Peel

Beneficial for the eyes

Cucumber peels are very high in beta-carotene, a type of vitamin A that has several advantages for eye health and vision. The relaxing impact of cucumber peels can help reduce puffiness and puffiness around the eyes when applied to the eyes for a period of fifteen minutes.

Helps prevent cancer

Regular eating can lower the risk of breast, prostate cancer, and cancers of the ovary.

Reduces constipation

Take off some cucumber peel and pouring with honey. Take this medication every day on an empty stomach. It also helps in removing stool from the colon because of its multiple benefits.^[7] **Neem**

Botanical Name

Azadirachta indica

Family

Mahogancy

Common Name

Nimba tree, Indian lilac, miracle tree

Indian native evergreen tree. Neem tree has great potential to generate health food that is not made of wood. It is versatile and adaptable. Among its many medicinal benefits is neem's ability to reduce inflammation. Neem is known as the "City of Pharmacy" in India because to its medicinal qualities, which have been used in Ayurvedic medicine for more than 4,000 years. Azadirachtin 48 is the main ingredient in neem oil, which has antimicrobial qualities. Also, it has been seen that neem extract can prevent many different kinds of cancers, such as those that results in skin, gynecological, colon, blood, prostate, and breast cancer. A number of chemicals are found in neem, including as glycosides, dihydrochalcone polyphenols, lettuce, azadirachtin (AZA), and neem.^[8]

Uses

Treats uneven skin tone Protects against environmental damage

Benefits

Reduces pimples and acne moles Antibacterial activity Anti-malaria effect Anti-ulcer effect.^[9]



Figure 6: Neem

Tulsi

Synonyms

Ocimum Sanctum, Ocimum Tomentosum

Biological Source

The fresh and dried leaves of Ocimum species, such as Ocimum sanctum L. and Ocimum basilicum L., are what constitute tulsi.

Family

Lamiaceae

Chemical Constituent

Ocimene, pinene, cineol, linalol, eugenol, methyl chavicol, methyl cinnamate, linolen, ocimene, anethol, estragole, thymol, citral, and camphor are some of the main active compounds found in tulsi plants.^[10]

Common Name

Holy Basil, Sacred Basil, Tulsi

Since ancient times, tulsi has been used in cosmetic products to treat multiple kinds of skin conditions, including age spots, rashes, skin allergies, wrinkles, blackheads, acne, and white skin. The therapeutic benefits of certain herbs, such as aloe vera, neem, cherimoya, papaya, centella asiatica, turmeric, mango, moringa, holy basil, and Phyllanthus Tulsi, have been extensively documented in Ayurvedic, Siddha, and Unani medicine. It was also shown to reduce stress by restoring normal blood pressure, cholesterol, and blood sugar levels. It can help minimize mental stress and have an anxiolytic impact by enhancing memory and cognitive performance. Tulsi is effective against a wide range of illnesses in both people and animals, making it a useful tool for sanitation of hands due to its broad-spectrum antibacterial action. The everyday application of Tulsi is evidence of Ayurveda's wisdom and supplies a case study of how traditional knowledge can take on today's challenges.^[11]

Uses

Tulsi promotes skin brightness.

Tulsi allows for face marks caused by acne.

Tulsi is useful for reducing pores on the skin.

All types of skin allergies and infections can be treated with tulsi.

Reduces acne and encourages aging skin health

Is rich in vitamin K, which is very beneficial to the skin.

It helps anti-aging



Figure 7: Tulsi

Benefits

Fever and Cold

Many fevers, including the common cold, are treated with the leaves. because dengue fever and malaria develop rapidly in the area during the rainy season, when the leaves are cooked with tea and administered to those with the disorder.

Cough

They are helpful in resolving the respiratory system of mucus, which makes them an essential feature of many Ayurvedic cough syrups and other medications.

Sore throat

Anxiety Boil the plant's leaves and offer users some water if they have a sore throat. You can use this extract as a mouthwash as well.

Respiratory diseases

One of the best herbs for treating asthma and other swasa issues is tulsi. All types of breathing disorders and colds can be effectively treated at home using khat, ginger, and honey. Colds can be directly relieved by this lavender and lavender extract.^[12]

Kidney Stones

Tulsi is very effective and beneficial to the kidneys. A patient's kidneys will be able to get rid of kidney stones if they use apple juice and honey for six months.

Heart disease

Tulsi is used for recovering heart "weakness" and many heart disorders.

Skin Diseases

Treating fungal infections and other skin conditions can benefit from the use of tulsi water. It can also be used to cure vitiligo.

Green Tea (Camellia sinensis)

A lot of experts think that a lot of health issues are starting up. Green tea's polyphenol component slows down the aging process.^[13]

Green Tea



Figure 8: Green Tea

Benefits

Effects on the skin

Tea has been used for many years to cure burns, wounds, and edema. Warm compresses can stop bleeding from insect bites, and green tea can be used topically to minimize swelling and painful.

Because tea includes flavonoids and tannins, it has antimicrobial qualities.

Not only does it minimize rashes, irritation, and injury Also, tea tree oil is a restoring and shineenhancing component of hair and skin care products. Researchers are still looking at green tea's potential as a self-made sunscreen. Ingredients in green tea can be applied topically for help in wound healing, skin regeneration, or healing. Or the management of conditions affecting the cell membrane, including as rosacea, psoriasis, ulcers, and aphthous actinic keratosis.^[14]

Combination stimulates DNA synthesis and bioenergetic production in in the ages keratinocytes, maybe in anticipation of cell division reactivation.

Studies show that the primary polyphenol found in tea, epigallocatechin gallate (EGCG), promotes the growth and tumors of skin cancer. EGCG Could Aid in Reviving Human keratinocytes, or skin cells, were employed in the Dying Skin study to investigate skin growth and contrast it with cell proliferation in response to EGCG.^[15]

Orange Peel Botanical Name

Citrus Aurantium Dulcis

Family

Rutaceae

Because orange peel contains a wealth of natural components that are beneficial to the skin, it often comes in herbal face creams. It benefits herbal skincare in the following ways:

Highly Vitamin C Content

Orange peel has a high vitamin C content that helps lighten dark spots on the skin and provide a more even tone. Vitamin C also promotes the synthesis of collagen, which increases softness in the skin and minimizes aging symptoms like wrinkles and fine lines.^[16]

Natural Exfoliant

Dried orange peel can be finely powdered and used as a mild exfoliant in face creams introduce new, healthy skin behind dead skin cells. This reduces acne, whiteheads, and blackheads.

Antioxidant Properties

Orange peel has a lot of antioxidants that work to fight free radicals and decrease the damage that oxidative stress causes to the skin. By doing this, environmental damage and early aging can be avoided. Moreover, it aids in calming irritated or inflamed skin.

Natural Astringent

The peel improves the skin and reduces the visibility of pores by acting as a natural astringent. For skin that is oily and prone to acne, this is helpful.

Oil Control

The characteristics of orange peel help to balance very oily skin, lowering the risk of diseases. Orange peel has the ability to do this.^[17]

Cure For Acne

Citric acid found naturally in orange peels has the potential to be a modest therapy for acne. Its antimicrobial and antibacterial qualities help in lowering the frequency of acne and pimples.

Improved Skin Texture

Orange peel can improve the texture of the skin, making it smoother and brighter, when it is regularly used in face creams.

Uses

Increase Skin's glow

Brightness skin

Tightens pores

Amla

Synonym

Embolic, Indian gooseberry, Myrobalan

Biological Source

Dried as well as fresh fruits of the plant

Family

Euphorbiaceae

Amla, also known as Indian gooseberry, is a well-liked component of herbal skincare products, such as face creams, due to its potent antioxidants and high nutritional value. Using amla in face creams has the following benefits for the skin.^[18]

Amla's advantages in the herbal face cream

High in Vitamin C

Amla is a great source of vitamin C, which is needed for the synthesis of collagen. Collagen reduces the look of fine lines and wrinkles by keeping the skin firm and elastic.

Anti-Aging Properties

Its antioxidant content reduces fine lines and wrinkles by absorbing free radicals.

Brightens Skin

Amla promotes an even skin tone by reducing pigmentation and dark patches.

Deep Cleaning

Amla's astringent qualities tighten pores, helping in skin cleansing, and protect against acne.

Moisturization

Amla's natural oils have the ability to deeply hydrate skin, keeping it smooth and moisturized.

UV Protection

Its antioxidant qualities aid in keeping the skin from chemicals and sun damage.^[19]

Uses

Antidiabetic, hypolipidemic, antioxidant, antibacterial etc.



Figure 9: Amla

General Ingredients

Water

This is the most important and commonly used raw material in all cream procedures. These are the most basic and easily available. Emulsions can also be made using water; depending on the proportions of water and oil phase used in the formulation, the amount of water used in the formulation dictates whether the emulsion is referred to as oil-in-water or water-in-oil.^[20]

Liquid paraffin

Emollients, or substances that soothe or soften the skin, include liquid paraffin. It functions by stopping the skin's outer layer from absorbing water. This moisturizes and softens the skin, reducing dryness. Treatment for dry skin involves the use of liquid paraffin. It relieves eczema, ichthyosis, and older pruritus, among other dry skin diseases.

Beeswax

Its roles in skincare include occlusive (it helps form a semi-occlusive skin barrier that reduces trans epidermal water loss), humectant (it locks in moisture), and emollient (it improves and softens the skin).

Borax

Beeswax-only creams must be well combined and allowed to stand before they split. Little doses of borax were therefore added after the beeswax. Borax saponified the fatty acids in beeswax, increasing the cream's stability.

Methyl paraben

Methyl paraben is most frequently used in cosmetic items as an antibacterial preservative. Preservatives, including methyl paraben, are used to inhibit pathogen growth and unwanted chemical changes in the body.^[21]

Procedure

Heat the liquid paraffin and beeswax in a borosilicate glass container, then note the temperature. (Oil level). In another container, dissolve borax and methylparaben in distilled water. Heat the mixture to 75°C to create a clear solution. (Water tank). The water level should then be added gradually to the hot oil level. Add the required amount of cucumber peel, tulsi extract, aloe vera gel, neem extract, and green tea extract, Amla, Orange Peel, honey, Rose Oil, turmeric after that. Blend until a milky cream is achieved. Next, add a few drops of rose oil for smells. Stir the mixture regularly as its temperature changes. Pour the mixture into a wide-mouthed container.^[22]

Sr. No.	Ingredients	Quantity Taken	Uses
1	Honey	2.5 gm	Blood sugar, Anti-oxidants, wound healing
2	Rose oil	2.5 ml	Flavouring agent, cooling agent, Emollient
3	Turmeric	1.4 gm	Colouring agent and antiseptic, anti- microbial
4	Aloe vera gel	2.5 ml	Anti-ageing, anti-inflammatory, moisturizer
5	Tulsi	2.5 ml	Anti-bacterial, adds Glow to the face
6	Neem	2.5 ml	Promote wound healing, relives skin dryness
7	Green tea	2.5 ml	Reduce wrinkles, hyperpigmentation
8	Cucumber Peel	2.5 ml	Provide soothing effect
9	Bee's wax	3 g	Emulsifying agent
10	Liquid paraffin	10 ml	Lubricating agent
11	Borax	0.2 g	Alkaline agent which reaches
12	Methyl paraben	0.02 g	Preservative

Table 1: Formulation of Herbal Cream

Evaluation of the cream Physical evaluation

In this assessment, the cream's color, flavor, texture, and bitterness are reviewed.

Irritation

After covering a square centimeter, apply adhesive to the surface, and note the time. Then, after every 24 hours, check and report irritation.^[23]

Wash ability

Possibility After putting a small amount of cream on your hands, clean them under running water.

Viscosity

No. identified by phase separation with a 1. 63 mils at 2.5 RPM Brookfield viscometer at 25°C. The prepared adhesive should be stored at 25 °C in an airtight container. At 100°C, protected from light. For a duration of a 30-day period the separation phase was under control for 24 hours a day.

Spread ability

The spread ability is defined as the time (measured in seconds) used to slide the cream out when two slides are placed on the slides under a given weight. More quickly the transition between two slides, the better the transmission. Use two large slide sets. Next, put adhesive on an identically sized glass slide. There is one more slide on top of the arrangement. Put a heavy weight or load on the top slide to press the candy equally into a thin layer on the two slides. The weight is then removed, and any additional slide preparation is done away with. The upper slider is free to slide under the force of gravity. Write a record.^[24]

Formula

For spread ability= $m \times l/t$

Whereas,

m = weight (30 grams) of the sample that is attached to or placed on the slide

l = Length of the slide (5 cm) t = elapsed time (in seconds)

Greasiness

To determine when the stain is greasy or oily, add the glue to the skin.

Phase Separation

Fill a mouth-fitting container with the prepared glue. The water and oil levels are seen independently after a 24-hour period.

Feel after

Pour the prepared glue into a mouth-fitting container. After a whole day, the water and oil levels are observed separately.^[25]

Sr. No.	Evaluation Parameter	Observation
1	Color	Faint green
2	Odour	Pleasant
3	State	Semi solid
4	Texture	Smooth
5	Washability	Easily Washable
6	Irritancy effects	Nil
7	Viscosity	21020
8	pH	7.4
9	Spread abilities	22.8
10	Greasiness	Non-Greasy
11	After Feel	Emollient
12	Phase Separation	No phase Separation

CONCLUSION

Mixing aloe vera gel, neem, cucumber, green tea, and tulsi, honey, turmeric, rose oil the usefulness of this Cream has been validated. There is a noticeable improvement with this natural parts. The formulation is easily applied to the skin and stable at room temperature, based on the results and discussions.

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