

FORMULATION AND EVALUATION OF MULTIFUNCTION GENERAL USE CREAM

Shipra Singh^{1*}, Harshita Jain², Parul Vyas³, Nitin Nama⁴

^{1,3}UG Scholar, Career Point School of Pharmacy, Career Point University, Kota, India

² Associate Professor, Career Point School of Pharmacy, Career Point University, Kota, India

⁴ Assistant Professor, Career Point School of Pharmacy, Career Point University, Kota, India

Corresponding email id: singh29shipra@gmail.com

Abstract- The natural cream is designed to cope with a number pores and skin concerns, consisting of dryness, redness, pimples, and wrinkles. The intermingle of herbal components withinside the cream is cautiously decided on to make certain that it offers the favored blessings even as being mild at the pores and skin. The cream is formulated the usage of natural extracts, critical oils, and different herbal compounds that paintings collectively to offer more than one blessing to the pores and skin. Herbal extracts consisting of papaya seed oil is wealthy in nutrients and antioxidants that defend the pores and skin from unfastened radical harm and enhance its usual fitness. Additionally, aloe vera offer deep hydration to the pores and skin, leaving it soft, clean, and supplement. Natural components consisting of Tulsi, neem, and turmeric have antibacterial and anti-inflammatory houses that assist to lessen irritation and save you pimples breakouts. These antioxidants additionally stimulate collagen production, which enables to enhance pores and skin elasticity and decrease the arrival of wrinkles and first-rate traces. This cream carries natural extracts, critical oils, and different herbal compounds paintings collectively to nourish, hydrate, and defend the pores and skin, making it a super desire for humans of every age and pores and skin types. With its more than one blessing, the natural cream is a flexible product that may assist to enhance the general fitness and look of the pores and skin.

Keywords: Antioxidants, Collagen, Papaya seed.

1. INTRODUCTION

In today's fast-paced world, where synthetic and chemical-laden products dominate the market, many individuals are seeking natural alternatives for their skincare routines. Herbal creams have emerged as a popular choice due to their ability to harness the power of nature and provide numerous benefits for the skin. Herbal creams are formulated using a blend of botanical extracts, essential oils, and other natural ingredients. These creams are designed to nourish, hydrate, protect, and rejuvenate the skin, promoting a healthy and radiant complexion. By utilizing the potency of plants, herbal creams offer a gentle and holistic approach to skincare. The key feature

of herbal creams lies in their ingredients. The carefully selected herbs possess various therapeutic properties, such as anti-inflammatory, antimicrobial, antioxidant, and soothing effects. They work synergistically to address common skin concerns, including dryness, acne, irritation, aging signs, and uneven skin tone.

Common herbal ingredients found in these creams include aloe vera, chamomile, lavender, green tea, rosemary, calendula, and many others. These botanical extracts are often combined with nourishing oils like coconut, jojoba, almond, and shea butter to enhance the moisturizing and emollient qualities of the cream. One of the significant advantages of herbal creams is their potential to minimize the risk of adverse reactions and side effects. Since they are predominantly made from natural sources, they are less likely to cause irritation or sensitization, making them suitable for individuals with sensitive skin. Furthermore, herbal creams avoid the use of harsh chemicals, parabens, sulfates, and artificial fragrances that can be harmful in the long run.

Herbal creams can be tailored to suit different skin types and concerns. Whether you have oily, dry, combination, or sensitive skin, there is likely an herbal cream available to address your specific needs. From providing deep hydration and reducing inflammation to restoring elasticity and combating premature aging, these creams offer a holistic approach to skincare.

To incorporate herbal creams into your routine, simply cleanse your face thoroughly, and then apply a small amount of the cream, gently massaging it into your skin. Depending on the product and its formulation, herbal creams can be used in the morning, evening, or both, as per your skincare regimen.

O/W (Oil-in-Water) and W/O (Water-in-Oil) : Understanding the Difference

O/W (Oil-in-Water) and W/O (Water-in-Oil) are two different types of emulsions used in skincare products. The main difference between the two lies in the ratio and distribution of oil and water within the formulation. Let's explore each type in more detail:

1. O/W (Oil-in-Water) :

- **Structure:** In an O/W emulsion, water serves as the continuous phase, meaning it forms the majority of the formulation. Oil is dispersed within the water phase as tiny droplets.
- **Characteristics:** O/W have a lighter consistency and feel more lightweight on the skin. They are often preferred for their fast-absorbing and non-greasy properties.
- **Benefits:** O/W are effective at providing hydration and moisture to the skin. They are suitable for normal to oily skin types and are commonly used in daily moisturizers and body lotions.
- **Usage:** O/W are typically applied to the skin, where the water phase is readily absorbed, leaving behind a thin layer of oil that helps retain moisture and prevent

excessive water loss.

2. W/O (Water-in-Oil) :

- **Structure:** In a W/O emulsion, oil serves as the continuous phase, surrounding water droplets dispersed within it.
- **Characteristics:** W/O have a richer and more occlusive texture compared to O/W. They can feel slightly greasier on the skin due to the higher oil content.
- **Benefits:** W/O provide a stronger barrier function, making them suitable for dry and sensitive skin types. They help to lock in moisture, prevent water loss, and provide long-lasting hydration.
- **Usage:** W/O are often used in products designed for extra dry or sensitive skin, such as intensive moisturizers, cold creams, and barrier creams. They create a protective layer on the skin that helps retain moisture and soothe irritation.

Both O/W and W/O have their unique advantages and are used in different skincare applications based on the desired effects and skin type. It's important to consider your individual skin needs and preferences when choosing between the two types of lotions. Additionally, formulations can vary across different brands and products, so it's always recommended to read the product labels and descriptions to understand the specific properties of the lotion you are using.

Herbal creams encompass a wide range of products that are formulated using natural and botanical ingredients. These creams are known for their holistic approach to skincare and can target various skin concerns. Here are some common types of herbal creams:

1. **Moisturizing Herbal Cream:** These creams are designed to provide deep hydration and nourishment to the skin. They often contain ingredients like aloe vera, shea butter, coconut oil, and natural oils, which help to replenish and retain moisture, leaving the skin soft and supple.
2. **Anti-Aging Herbal Cream:** Anti-aging herbal creams focus on reducing the appearance of fine lines, wrinkles, and age spots. They typically contain botanical extracts rich in antioxidants, such as green tea, ginseng, rosehip, and vitamin C. These ingredients help to promote collagen production, improve elasticity, and protect the skin from environmental damage.
3. **Acne-Fighting Herbal Cream:** Herbal creams targeting acne-prone skin often contain ingredients with antimicrobial and anti-inflammatory properties. Examples include tea tree oil, witch hazel, chamomile, neem, and turmeric. These creams help to soothe

inflammation, control excess oil production, and reduce the occurrence of breakouts.

4. **Calming and Soothing Herbal Cream:** These creams are formulated to calm and soothe sensitive or irritated skin. Ingredients like chamomile, aloe vera, calendula, and lavender are commonly found in such creams due to their anti-inflammatory and soothing properties. They can help alleviate redness, itching, and skin discomfort.
5. **Brightening and Whitening Herbal Cream:** Herbal creams for brightening and whitening purposes often contain botanical extracts like licorice, kojic acid, mulberry, and vitamin C. These ingredients help to even out skin tone, reduce the appearance of dark spots and pigmentation, and promote a more radiant complexion.
6. **Herbal Eye Cream:** Eye creams formulated with herbal ingredients target specific concerns around the delicate eye area, such as fine lines, puffiness, and dark circles. Common herbal ingredients found in eye creams include cucumber extract, rosehip oil, green tea, and aloe vera. These ingredients can help hydrate, firm, and revitalize the eye area.
7. **Herbal Sunscreen Cream:** Herbal sunscreen creams offer natural sun protection by using ingredients like zinc oxide, titanium dioxide, and plant extracts with UV-blocking properties. These creams provide broad-spectrum protection against UVA and UVB rays while nourishing and moisturizing the skin.

It's important to note that the specific formulation and ingredients of herbal creams can vary across brands and products. When choosing an herbal cream, consider your skin type, concerns, and any specific needs you may have. It's also advisable to read the product labels and consult with a dermatologist or skincare professional if needed.

Advantages of Herbal Creams:

1. **Natural Ingredients:** One of the main advantages of herbal creams is that they are formulated using natural ingredients derived from plants, herbs, and botanical extracts. This can be appealing to individuals who prefer to use products with minimal or no synthetic chemicals, as natural ingredients are often considered gentler on the skin.
2. **Potential for Fewer Side Effects:** Herbal creams are generally less likely to cause adverse reactions or side effects compared to products containing synthetic ingredients or harsh chemicals. Natural ingredients in herbal creams are often well-tolerated by a wide range of skin types, including sensitive skin.
3. **Holistic Approach:** Herbal creams take a holistic approach to skincare by considering the overall health and well-being of the skin. They often provide a combination of benefits, such as hydration, nourishment, soothing, and antioxidant protection, contributing to the

overall improvement of skin health.

4. **Potentially Effective for Specific Concerns:** Many herbal creams are formulated to address specific skin concerns, such as acne, aging signs, dryness, or sensitivity. The botanical extracts and natural ingredients used in these creams often possess therapeutic properties that can help alleviate or improve these concerns.
5. **Environmental Considerations:** Herbal creams are often formulated with ingredients that are more environmentally friendly and sustainable. Manufacturers may prioritize sourcing natural ingredients responsibly and employing eco-friendly production methods, appealing to individuals who are conscious of environmental impact.

Disadvantages of Herbal Creams:

1. **Variability in Efficacy:** While herbal creams can provide benefits for various skin concerns, the efficacy can vary from person to person. The effectiveness of herbal ingredients may depend on factors such as individual skin type, severity of the concern, and the concentration of active compounds in the product.
2. **Limited Scientific Evidence:** While herbal remedies have a long history of traditional use, scientific studies supporting the effectiveness of specific herbal ingredients in skincare can be limited. The lack of extensive scientific research may make it challenging to determine the true efficacy and potential benefits of herbal creams.
3. **Potential Allergic Reactions:** Although herbal creams are generally considered gentler on the skin, it's important to remember that allergic reactions can still occur. Some individuals may have sensitivities or allergies to specific herbal ingredients, so it's crucial to read the product labels and patch test new products before full use.
4. **Shorter Shelf Life:** Herbal creams that are formulated without synthetic preservatives may have a shorter shelf life compared to products that contain artificial preservatives. This means they may have a shorter expiration date and require proper storage and handling to maintain their effectiveness.
5. **Availability and Cost:** Depending on the brand and location, herbal creams may not be as widely available as mainstream skincare products. Additionally, due to factors such as sourcing of quality natural ingredients and production methods, herbal creams may sometimes have a higher price point compared to conventional skincare options.

2. OBJECTIVES

- 1) The intention or goal of the prevailing studies is to set the components for natural cream for the cause of Moistening, Nourishing, lightening & remedy of diverse illnesses.

- 2) To formulate natural cream with the aid of using the usage of right method.
- 3) To examine formulated product with the aid of using the usage of distinct checks like, pH, unfold cap potential and so forth.

3. MATERIALS AND METHODOLOGY

Collection of plant materials –

All the herbs such as turmeric, papaya, aloe vera and neem were obtained from local botanical garden of Career Point School of Pharmacy or from local market.

1.Aloe vera - Aloe vera may be utilized in diverse ways. The leaves are gray to inexperienced in color and styles of those plants' white flecks at the top and decrease stem floor. in recent times aloe vera is utilized in dermatology for diverse purposes. It particularly located in dry areas of Africa, Asia, Europe and America. (6)

Botanical call- Aloe berbendis

Family- Liliaceae

The utmost function of aloe vera on this cream is moisturation



2.Turmeric – The starting place of use of turmeric is sort of 4000 yrs. vintage to the Vedic subculture in India. It changed into utilized in diverse purposes. Botanical call is curcuma longa. turmeric carries foremost phytoconstituents consisting of diarylheptanoids which arise in aggregate termed as curcuminoids. Rhizome is located underground. Rhizome is root like stem and it produce yellow turmeric spice. (7)

The function of turmeric on this component is glow your pores and skin and antiseptic, anti-inflammatory.



3.Neem – (Azadirachta indica). It is likewise referred to as Indian lilac. It belongs to the northeast of Indian subcontinent additionally it's far naturalized and grown across the global.

product crafted from neem leaves is utilized in conventional drug treatments for centuries. Over the time studies has proven that neem has numerous pharmacological potentials. Relieves pores and skin dryness and enables in treating redness. The maximum bioactive compound this is found in neem leaves in neem leaves in abundance are Azadirachtin, nimbin and nimbindine. (8)



4. Orange peel – orange peel has citric acid. It organically lightens and brighten the pores and skin. With ordinary use of orange peel powder, it is able to dispose of tan. It may be utilized in stopping ugly pores and skin breakout. pectin is the biopolymer received from orange peel that's utilized in meals in addition to pharmaceutical industry. Antioxidants also are found in orange peel and it additionally assist in hydrating stupid and dehydrated pores and skin. (9)



5. Papaya seed –papaya incorporate extensive spectrum of phytochemicals consisting of nutrients, mineral, polysaccharide, alkaloid, glycoside, fat and oils and so forth papaya seeds incorporate antiaging houses. It enables in lowering first-rate traces and wrinkles. It additionally enables in keeping pores and skin elasticity. those seeds also are wealthy in polyphenols and flavonoids. (10)



Extraction of the plant materials used in preparation of cream-

1.Preparation of turmeric extract- Take 10ml distilled water in a beaker. Weigh and upload 1

gm turmeric powder in distilled water. Heat in water bath at eighty degree to hundred degree Celsius for 10 to 15 minutes. Then after filtration turmeric extract is received.



2.Preparation of neem extract- sparkling neem leaves are accumulated and dried after washing. Then it's far powdered. Take 20 ml distilled water in beaker. Add five gm of neem powder in it. Heat it in water bath at 80 degrees to 100 degree Celsius for 10 to 15 minutes. After filtration neem extract is received.



3. Preparation of Orange peel extract-

orange peel is dried after washing. After washing orange peel is powdered. Take 20 ml distilled water in a beaker. Add 4 gm of orange peel powder in it. The answer is heated on water bath at 80 to 100 degree Celsius for 10-15 minutes. After filtration orange peel extract is received.



4. Extraction of papaya seed oil -

The extraction of papaya seed oil changed is achieved by the usage of Soxhlet apparatus. First the papaya seeds had been solar dried after which powdered after which crammed in thimble of Soxhlet extractor. Then the solvent hexane is crammed in spherical backside flask. After 5-6 hrs. papaya seed oil is extracted. (9)



FORMULATION TABLE:

S.no	Ingredients	Formulation(F1)	Formulation(F2)	Formulation(F3)
1.	Aloe vera	3 ml (10%)	3 ml (10%)	3 ml (10%)
2.	Neem	1.5 ml (5%)	1.5 ml (5%)	1.5 ml (5%)
3.	Orange peel	3 ml (10%)	3 ml (10%)	3 ml (10%)
4.	Papaya seed oil	1.5 ml (5%)	1.5 ml (5%)	1.5 ml (5%)
5.	Bees wax	3 gm	5 gm	6.5gm
6.	Liquid paraffin	13 ml	11 ml	10 ml
7.	Borax	0.2 gm	0.4 gm	0.6 gm
8.	Methyl paraben	0.02 gm	0.04 gm	0.06 gm
9.	Orange oil	q. s	q. s	q. s
10.	Distilled water	q. s	q. s	q. s
11.	Total	30 gm	30 gm	30 gm

METHOD OF PREPARATION:

1. Heat the liquid paraffin and beeswax in a borosilicate glass beaker to 75 °C, then hold that temperature throughout the heating process. (Phase oil).
2. Borax and methyl paraben should be dissolved in distilled water and heated in a separate beaker to a temperature of 75 °C to produce a transparent solution. (Water phase)
3. Add the heated oily phase to the aqueous phase gradually after that. After that, stir vigorously while adding measured amounts of aloe vera gel, neem extract, tulsi extract, turmeric extract, orange peel extract, and papaya oil to create a smooth cream.
4. Next, add a few drops of rose aroma oil.

5. Place the slab with this cream.
6. Then, to give the cream a smooth texture and properly combine all the components, mix the cream in a geometric pattern on the slab. (11)

4. RESULT&IMPLEMENTATION

EVALUATION OF CREAM

1.Physical evaluation

In the physical evaluation various parameters was observed and monitored. These parameters are colour, odour, texture and state.

2.Wash Ability

A small amount of prepared cream is applied to the upper surface of the hand, and after the cream has been applied, it is washed with tap water to see if the cream is washable or not. (15)

3.Phase Separation

To check the phase separation cream was stored in a sealed container. It should be kept away from the sun. Then, for 30 days, phase separation was monitored for 24 hours. Any change or phase separation is monitored and documented. (15)

4.Irritancy Test

On the dorsal surface of the left hand, a 1 cm² area is marked. Then cream was applied to the skin's surface, and time was recorded. The skin is then inspected for irritation up to a 24-hour period and reported. (14)

5.P^H

The ph of the three formulations was tested. The ph of the formulated cream should be similar to that of the skin. (13)

Evaluation of all the above three formulations is given below.

1. Physical evaluation

S.no	parameters	Formulation F1	Formulation F2	Formulation F3
1	Color	Yellowish green	Yellowish green	Yellowish green

2	Odor	Pleasant	Pleasant	Pleasant
3	Texture	Corase	Very smooth	Smooth
4	State	Semisolid	Semisolid	Semisolid

2. Irritancy study observation

S no.	Formulation	Irritant effect
1	F1	Nil
2	F2	Nil
3	F3	Nil

3. Washability observation

S.no	Formulation	Wash ability
1.	F1	Easily washable
2.	F2	Easily washable
3.	F3	Easily washable

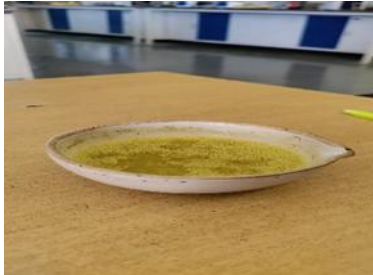
4. Phase separation

S no.	Formulation	Phase separation
1.	F1	No phase separation
2.	F2	No phase separation
3.	F3	No phase separation

5. pH Observation

S no.	Formulation	P ^H range
1.	F1	5-6

2.	F2	6-7
3.	F3	6-7



F1



F2



F3

5. CONCLUSION

By using various ingredients like turmeric, neem, Tulsi, aloe vera, papaya, turmeric in the formulation of multifunction cream shows significant activity. These natural ingredients are believed to be effective in treating various skin conditions, such as dryness, acne, and aging. Based on the above evaluation results F2 formulation was found to be best among the three formulations. The present work focuses on the potential of herbal extract for cosmetic purpose.

The formulation of multipurpose herbal creams typically involves a combination of plant extracts and oils that have been traditionally used in medicine and skincare. One of the key benefit herbal creams is that they often do not contain harsh chemicals, such as parabens, phthalates, and sulfates, That can cause skin irritation and other adverse effects. This makes them a safer option for people with sensitive skin or allergies.

Overall, multipurpose herbal creams can be a beneficial addition to a skincare routine for those who are looking for a natural and holistic approach to skincare. However, it is important to choose a product that contains high-quality, effective ingredients and to use it as directed. With proper use and caution, herbal creams can help to promote healthy, glowing skin.

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