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Formulation and Evaluation of Herbal Multipurpose Cream

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Abstract

Multipurpose creams are semi-solid preparations used to lower the risk of skin disorders and fight wrinkles. The primary goal of the research is to produce multipurpose creams utilizing various herbs and then analyze their efficacy. The herbs utilized in the preparations include dried bael leaf powder, amla powder, neem powder and bael leaves. The article emphasizes the importance of topical drug delivery systems in dermatology, highlighting the benefits of delivering medications directly to the skin for localized treatment. Various types of cream formulations, categorized as oil-in-water (O/W) and water-in-oil (W/O) emulsions, are discussed along with their specific uses and properties. The use of natural ingredients in creams is encouraged instead of additives to promote safe and environmentally friendly skin care products. Furthermore, the article reviews specific botanical extracts such as Aegle marmelos (Bael), Emblica officinalis (Amla), and Azadirachta indica (Neem), known for their medicinal properties in skincare. These extracts are analyzed for their chemical compositions and therapeutic benefits, highlighting their potential applications in herbal cosmetic formulations. The study concludes by discussing the importance of cosmetic products in skincare routines and explaining their therapeutic use and procedures. It advocates for the development of natural and herbal-based skincare products to meet consumer demand for safer and effective cosmetic solutions. "The multifunctional creams underwent various tests including irritancy, washability, pH, viscosity, phase separation, spreadability, and compatibility assessments. The results indicated that each formulation yielded favorable outcomes."

Keywords: Cosmetic, bael, antifungal, acne, dermatitis, multipurpose

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INTRODUCTION

The English term "cosmetic" originates from the Greek word "kosmesticos," meaning "to adorn," reflecting substances used to enhance appearance. Formerly known as "cosmetics," cosmetics were invented by slave women, and first recorded in ancient Rome." Initially aimed at improving attractiveness, the use of makeup dates back to ancient Egyptian times, where it was rudimentary, involving body paint and basic eye coloration. In contemporary times, cosmetics play a vital role for both genders, driven by the desire for youth and beauty. They encompass a wide range of products such as lotions, lipsticks, perfumes, eyeshadows, nail polishes, and hair sprays. Foundations and face powders provide a radiant complexion after applying base cream, while lipsticks, formulated with wax and cocoa butter, are popular among women of all ages. Many people use cosmetic

products like colognes, gels and lotions every day. Cleansing creams are often employed as facial cleansers, and newer innovations include anti-aging treatments that maintain youthful skin. Cosmetic creams, including Vaseline and Lanolin, nourish and soften dry, chapped skin, acting as lubricants and removing impurities. Dry creams are essential in soap and gel production, forming the foundation for healthy skin [1].

For the skin to remain functional and aesthetically pleasing, the water content of the stratum corneum and the lipids on its surface must be in equilibrium. The skin is the body's outermost layer, thus environmental stimuli constantly come into contact with it. Both external and endogenous variables have the potential to upset this balance [2].

In addition, conventional soaps and detergents, combined with topical irritants such as alcohol and hot water, can remove oil from the skin Dry skin, a caused by dehydration, it can feel hard and uncomfortable and can sometimes be sore and painful. It looks rough, jagged and cracked. This breakdown of the skin barrier leads to many skin conditions. Brightening treatment aims to improve skin tone and health by giving a healthy appearance. All humidifiers share the same basic properties of moisturizing, softening, and softening, although many are promoted as natural, safe, organic, or herbal. Most of the solvents on the market are based on adhesives, emulsifiers, and curing agents , solvents and stabilizers [3].

Topical Drug Delivery Systems

The human body has been exposed to drugs for the longest time through a range of methods, including topical, oral, sublingual, rectal, parental, and inhalation. Topical shipping is the process of applying a drug containing ingredients to the skin in order to treat a cutaneous condition or the skinrelated symptoms of a common illness (such as psoriasis) right away. The goal is to contain the drug's pharmacological or effect on the skin's surface or inside the skin. Semisolid formulations come in a variety of forms and are the most common device for topical delivery; other options include foams, sprays, medicated powders, options, and even medicated adhesive structures.

Benefits of the topical medication delivery system

- Stopping the first omit's metabolism.
- Easy to use and practical.
- Keep away from danger.
- The disadvantages of intravenous treatment and different circumstances surrounding absorption, such as pH variations, the existence of enzymes, the duration of gastric emptying, etc.
- Achieving efficacy through continuous drug input at a lower total daily dosage of the medication.
- Prevent drug level changes within and across patents.
- In addition, the product or its ingredients may cause skin irritation or skin irritation.
- Most tablets cannot pass through skin pores or mucous membranes because they are poorly lipid soluble and have a high molecular weight.
- Because it absorbs so slowly, it can only be used for these capsules that need very little amounts of plasma attention for activity.
- The possibility of allergic reactions; limited to drugs whose effects rely on very low plasma concentrations.
- Skin absorption of drugs with larger particle sizes has become more difficult [4].

CREAMS

Creams are topical drugs that can be administered topically to the skin. Viscomulsions of two types of oil in water or oil in water" with varying amounts of water and oil Dosage variants are creamy liquid or semisolid [5].

Creams are used for medicinal or cosmetic purposes, including cleansing, beautifying, improving looks, and protecting. These The goal of topical preparations is to locally provide medication to the skin's underlying layer or mucous membrane. These products are intended to be applied locally to the skin to deliver treatment for acne and skin conditions [6]. Creams are classified as pharmaceutical products because they are produced only by methods developed in the pharmaceutical industry. Both medicated and non-medicated lotions are excellent for treating a variety of dermatoses and skin conditions. Humans can use ayurvedic, herbal, or allopathic creams according to their preferences for treating specific skin diseases. They consist of one or more drug resources that have been diluted or distributed in a suitable basis. Creams can also be categorized as an o/w or w/o type of emulsion based on phases. Historically, semisolid formulations that were either oil-in-water (such as vanishing cream) or water-in-oil (such as bloodless cream) were referred to as "time period creams [7].

DIFFERENT TYPES OF SKIN CREAMS

They are separated into two categories

- *Oil-in-water (O/W):* An emulsion in which oil is dispersed in small droplets along the length of the liquid phase is known as an oil-in-water (O/W) emulsion These are formulated with oil droplets pour it in constantly sprinkle.
- *Water-in-Oil (W/O):* Creams with a thin layer of oil on top of small water droplets. When water is present in the dissolved phase and oil is present in the dissolved phase, a water-in-oil (W/O) type emulsion is formed [8–11].

CLASSIFICATION OF CREAMS

Different types of cream based on their intended use, properties, and emulsion type.

Make-up Cream (o/w Emulsion)

a. Creams that disappear.
b. Lotion foundations.

Cleansing Lotion

(without emulsion), cleansing cream, and cleaning milk

Winter Cream without an Emulsion

- Moisturizers or cold creams.
- General purpose and all-purpose creams.
- Rubdown and night creams.
- Cream that shields the skin.
- Body and hand lotions [12–15].

COMPOSITES USED GENERALLY IN SKIN CREAMS

The skincare products include the following.

- *Water:* The most important and omnipresent ingredient in any cream recipe is water. These are cheap and easy. Water is used as a solvent for a variety of chemicals in endothelial tissues and skin. For the preparation of creams, water that is devoid of any contaminants, toxins, germs, etc. is utilized. Emulsions can also be made with water depending on the amount added to the mixture. Depending on the proportion of water and oil used, this mixture is sometimes referred to as an oil-based solution, sometimes as an oil-infused water [16].
- *Oil, fat and waxes:* A significant amount of oil, fat, wax, and their compounds are found in creams. Depending on their characteristics, oils serve as a preservative, thickener, emulsifier, and/or perfumer. There are two further forms of oil:-mineral and glyceride.
- *Mineral oil:* Mineral oil is made from hydrocarbons extracted from petroleum. Mineral oils are widely used in cosmetics because they are odorless, soft and highly refined. Mineral oil is unable to solidify and clog skin pores, and it seldom triggers allergic reactions. It maintains the

body moisturized, reduces water loss from the body, and is low-cost and lightweight. The formulation of creams uses a variety of mineral oils.

The Following are some Examples

- Heavy liquid paraffin
- Light liquid paraffin
- The liquid form of petroleum

Glyceride Oil

Generally, vegetable oils are in the form of glyceride oils. Glycerid oils include almond, avocado, castor, coconut and olive oils.

Vegetable Oil

Create a barrier over the skin's surface and pores to reduce water loss and help keep the skin firm. In addition, pharmaceuticals and other personal care products can use vegetable oils to make fats or oil complexes [17].

For instance, almond oil, sunflower oil, germ oil, avocado oil, etc.

- *Waxes:* Some of the ingredients that are utilized in the cream recipe are spermaceti, ceresin, beeswax, and carnauba wax. Wax is used in cosmetics because it prevents the water and oil components from separating from the emulsion. Additionally, these waxes stick to the skin and harden the sebaceous glands.
- *Fats:* Creams are trained using a variety of fat types. These materials may be derived from minerals, plants, or animals. Moreover, both plants and animals can produce fat and glyceride oils. It is made from a combination of glycerin and high fat. During saponification, glycerin, fatty acids or soap can be produced, depending on the process.The saturated group, lauric, margaric, plamitic, and stearic acids are the most prevalent among these fatty acids. Liquid oleic acid is the most well-known unsaturated fatty acid. Especially the coca butter contains oils such as lard, grease, lamb tallow, almond oil, peanut oil, sesame oil, olive oil and pork starin which is widely found in many cosmetic products [18].
- *Lanolin:* Sheep for wool fat. There are two types of lanolin: Hydrous lanolin, with a moisture content of 25% to 30%. Anhydrous lanolin has a temperature range of 38–42°C and a faint smell. Due to the lubricating properties of these compounds, the skin's surface seems smooth and carefree. Lanolin mixes well with other ingredients in cosmetics and personal care products and facilitates the formation of emulsions.
- *Humectants:* These essential multipurpose ingredients are present in the majority of skin care products. Hydrophilic creatures are liquids. Only these substances have the ability to both absorb and retain water. Very useful in providing exfoliating and moisturizing services. Compounds such as sodium PCA, betaine, glycerin, hydroxyethyl urea, and sodium lactate are examples of solvents [19].
- *Perfumes:* A material known as perfume gives off an aroma or order, such as a pleasant and superior fragrance. Among the natural fragrances found in creams are:

White Flowers

1. Dreams of Roses
2. The Orange Blossom [20]

- *Vitamins:* Vitamins are vital for maintaining the skin's and body's overall physiological function. Vitamins A, B, C, and E are often added to creams.
- *Preservatives:* Preservatives should be used in the manufacture, distribution, storage and consumer use of cosmetic products to prevent microbiological changes that lead to infection adding that antioxidants can be used to protect against changes induced by oxygen consumption. Artificial preservatives can keep things fresher for longer when used sparingly [21].

Aim and purpose

Aim

Creating and Assessing a Herbal Multipurpose Cream.

Purpose

1. To minimize acne, inflammation of the pores, skin disorders, dry skin, wrinkles etc.
2. To improve facial shine.
3. To make a healthy skin and shine skin.

Need of work

1. Natural cosmetics are the safest to use and work very well compared to other very simple beauty products available in the market.
2. Compatible with all skin types and pores. Anyone with any type of pores or skin can use them without worrying about their health deteriorating.
3. No adverse reactions.
4. A herbal product is one that is created from botanicals, or plants, and is used to maintain health or treat ailments.
5. The herbal component of botanicals enriches the body with vitamins and other beneficial minerals rather than having any negative effects on it.
6. To ensure that they are safe and excellent for use by humans, the majority of cosmetic products undergo first testing on animals. Natural cosmetics, however, prefer not to undergo animal testing. Ayurvedic experts evaluate these natural medicines in lab settings with kingdom of the artwork technologies without the use of animals.
7. The cost of natural cosmetics has decreased. In actuality, they are easily accessible and reasonably priced.

Categories

1. Skin usage is recommended.
2. Herbal cosmetics to enhance the appearance of facial skin and encourage skincare for people of all ages.

Timetable of Work

1. Compiling
2. Readying raw materials
3. Raw material normalization:
   a. Organoleptic process comparisons;
   b. Microscopic process evaluation
   c. Contrast in physico- chemistry.

Materials and Procedures

Plants' chemical makeup and characteristics:

Marmelos Aegle (Bael)

Due to its many therapeutic qualities, Aegle marmelos (L) Correa, sometimes known as Bael or Bilva, a member of the family Rutaceae, has been employed extensively in indigenous Indian medical systems. Hindus revere the eagle marmelos tree and offer it in prayers to the gods Lord Shiva and Parvati as a result, the tree is also recognized by the name Shiva duma, or "the tree of Shiva." The Bael tree originates in Central India and the Eastern Ghats. Commonly found in tropical and subtropical regions, it is native to the Indian subcontinent [22].

One of the most significant medicinal herbs in India is bael. More than 100 phytochemical compounds have been identified from numerous plant sources, such as phenols, flavonoids, alkaloids,

cardioglycosides, saponins, terpenoids, steroids and tannins These chemicals have a well-established biological and pharmacological potential in the treatment of several chronic conditions, such as heart disease, cancer, and gastrointestinal disorders. The antibacterial, anti-inflammatory, anti-diabetic, anti-ulcer, anti-cancer and anti-inflammatory activities of extracts from this plant have been demonstrated in various animal models.

The fruit, stem, bark, and leaves of the Aegle marmelos plant are all used to treat a range of skin and ocular conditions and have medicinal significance. Because the leaf produces bioactive compounds as secondary metabolites, it is believed to be one of the plant's biggest accumulatory components. However, the installation of baels used for water supply and other external housekeeping tasks is less common. Therefore, the purpose of this study was to assess the phytochemical suitability and moisturizing ability of Aegle marmelos leaf extract in both chloroform and aqueous form [23].

Synonyms

Belou marmelos.

Biological Source

Aegle marmelos Corr., a member of the Rutaceae family, is the source of bael, which is made up of its unripe or partially ripe fruits, slices, or irregular bits. Scientific classification of Aegle marmelos were shown in Table 1.

Table 1. Scientific classification.

Kingdom	**Plantae**
Order	Sapindales
Family	Rutaceae
Subfamily	Aurantioideae
Genus	Aegle Corrêa
Species	A. marmelos

Chemical Components

The main components of the formulation are furocoumarin marmelosin A, B and C (0.5%). Other coumarins include umbelliferone, psoralin and marmesin. The product also contains 11–17% carbohydrates, proteins, volatile oils and tannins. Additionally, the pulp has the proper amounts of vitamins A and C. Fruits have been found to contain the alkaloids O-methylhalfordinol and iso-pentylhalfordinol. Alkaloids Dictamine, Marmelin and Angelanine have also been found in the product.

Cumarin

Ant-inflammatory, Antiviral, anti-oxidant.

Uses

Marmeline

Anti-inflammatory and antioxidant Imperatorin: A calming agent An antioxidant is aegeline.

This well-known medication is used to treat dysentery and diarrhea in Ayurveda. The function is filled with mucilage. The leaves are said to help diabetics because they contain alkaline properties. Seed oil has antifungal, antibacterial and antiprotozoal properties. Dasmula, the popular Ayurvedic training program, includes beel root as one of its ingredients. It can be utilized as an abortifacient agent and should therefore no longer be used in pregnant women because huge dosages of it may also cause abortions.

Benefits of Bael Leaves as Medicine

- Bael leaves (Figure 1) are used as a laxative for mucous membranes that discharge freely and for asthma.
- A plant leaf decoction is used to reduce or eliminate fever and also improves mucus discharge from the bronchial tube.
- A heated leaf poultice is applied for severe conjunctival inflammation and bodily component irritation. Jaundice and dropsy can be treated with bael leaf juice.
- Bael leaf extract helps to maintain body weight at normal levels and to control blood sugar.

Figure 1. Marmelos Aegle (Bael).

- Bael leaves function similarly to insulin in that they increase the body's capacity to utilise glucose that is accessible externally by promoting glucose absorption.
- Bael extract is used to treat various other issues, such as lowering blood urea, lipid peroxidation, and low-density lipoprotein cholesterol. It also increases the levels of enzymes such as glutathione peroxidase, catalase, and extraordinary dioxide dismutase in the liver and serum of experimentally diabetic animals.
- It is believed that younger and fresher bael leaves cause abortion and sterility.
- Bael leaves are used to make medicinal oil, which provides treatment from re-current respiratory and bloodless infections.
- Back discomfort, stomach issues, beriberi, acute bronchitis, childbirth, hair tonic, abscess, cuts and wounds, anxiety disorders, cardio tonic, and other conditions are treated with leaves.

AMLA

Alternative Terms

Amalki, Emblica, and Indian Goose Berry.

Biological Source

This includes both appropriately dried and fresh fruits from the Emblica Officonail plant. Phyllanthus emblica Linn. Gaerth.being a part of the family.

Microscopic Features

- *Color:* Upon maturity, the inexperienced color changes to a pale yellow or brick red.
- *Odor:* It has no smell.
- *Taste:* Amla has a sharp, astringent flavor.
- *Dimensions:* 1.5

Chemical Components

Ascorbic acid, or vitamin C, is abundant in amla fruits and contains 600–750 mg per 100 g of fresh pulp. Additionally, fruits include 5% tannin, phyllemblin, and 0.5% fat. 75% of the fresh fruits are wet. The frits are dried out and kept cold.

Figure 2. Amla.

Activity

Amla (Figure 2) is thought to be crucial for slowing down the aging process because it is a high source of vitamin C. It enhances the health of the skin. Oxygen free radicals, which primarily harm different cells and tissues, are the primary cause of ageing. Free radicals are scavengers that are broken down by vitamin C [24].

Uses

- Indian remedies make extensive use of amla fruits.
- It has laxative, diuretic, refrigerant, and caustic properties.
- Dried fruits are given to treat nausea and vomiting.
- Iron supplements are also given for anemia, indigestion and jaundice.

NEEM

Synonym

Margosa

Biology

The whole of the flying part of the plant genus Azadirachta indica belonging to the family Meliaceae and its source of biological sources.

Macroscopic Features

Leaves

Imparipinnate, Exstipulate, and Alternate Leaflets lanceolate, 5.0–10 cm long, tightly crowded at the tips of branches. The leaves are bitter to the touch, green in color, and have a serrated border.

Bark

They have oblique and longitudinal furrows that are thick, rough, and brown in color. internally starchy white, bitter in flavor, and laminated with a distinct neem aroma.

Chemical Constituents

The chemicals that have been extracted from the plant are classified as triterpenes, such as stimasterol (leaf), nimbol (Bark), and diterpenes, such as sugiol. Neem leaves (shown in Figure 3) have a minimum rutin content of 1.0% w/w.

Activity

Antifungal, antibacterial, and relieves dry skin.

Uses

Scientific research has revealed that it includes a variety of chemicals with nematicide, insect repellent, and antibacterial qualities. There is spermicidal action in the seed oil.

Figure 3. Neem.

BUTTERFLY BLUE PEA

Biological Source

Clitoral ternate is a member of the Magnoliospida class, the Fabacea family, the Phylum Trichophyte, and the Kingdom Plantae [25].

It is frequently employed as a decorative plant and a revegetation species, however in Southeast Asia, the blue bloom pigment has long been used as a culinary coloring [26, 27].

The presence of ternatins, or polyacylated anthocyanins, in blue pea flower (shown in Figure 4) anthocyanins makes them special. Tenatins are polyacylated derivatives of 3,3',5'triglucoside delphinidin. The article also compares the anthocyanins found in blue pea flowers to two additional naturally occurring blue food coloring agents: phycocyanin, or spirulina, and pigments derived from genipin. Potential natural blue food coloring ingredient made from blue pea flowers.'4The butterfly pea, Clitoria ternatea, has garnered a lot of curiosity.

Based on its application as a nitrogen-fixing crop and fodder, as well as its use in traditional medicine, food coloring, cosmetics, and sustainable pesticides. Rich in bioactive ingredients, butterfly pea flower (BP) has the potential to be used to make tasty, healthful dishes. By employing mixtures of BP and yellow pea flour (YP), antioxidant and dietary fiber-enriched morning cereals were created by the process of extrusion cooking. YP was treated with BP at concentrations of 0%, 5%, and 10% (w/w), in that order. After that, two temperature profiles—130 and 150 °C for the die—were extruded.

Morphology

Clitoria ternatea is a beautiful perennial climber that grows up to 2-3 meters in length and twines delicate stems. In height, growing both wild and in gardens, and producing large, showy blue or white flowers that resemble conch shells. The root system is made up of numerous thin lateral roots and a somewhat robust taproot with few branches. Six One to many wiry, glaucous, purplish stems are carried by the thick horizontal root, which can reach a length of over two meters. The petioles are 2-2.5 cm long, pinnate leaves, and the stipules are 4-mm length, linear, and sharp. Filiform stipules; 5–7 subcoriaceous leaflets, 2.5–5 by 2-3.2 cm, elliptic–oblong, acuminate or caute. The 45 cm long, single, very small pedicellate flowers have an orange center, they are deep blue to blue, mauve, or sometimes white. The flat, linear, beaked pods are 0.7–1.2 mm in diameter, 6–12 cm long, and moderately pubescent. They can hold up to 10 seeds each.

The seeds have an oval or subglobose shape, measuring 4.5–7.0 mm in length and 3–4 mm in width. They are colored yellowish-brown to blackish [28–30].

Biological Activities

The flowers of Clitoria ternatea are rich in phytochemicals, which demonstrates excellent anti-inflammatory, anti-tumor, anti-tumor-causing, antioxidant, and antidiabetic qualities [31]. investigation of acute toxicity employing albino When given an aqueous ethanol extract of the flower

(2000 mg/kg bodyweight), wistar rats did not exhibit any abnormalities or indicators of mortality, and there was no discernible change in their haematological parameters. The extract is safe to eat because it showed no signs of acute toxicity [32].

Flowers from the Clitoria ternatea plant may be used as a functional food added to a variety of foods or even as a medicinal supplement or medication used with brand-name medications to increase patients' response to therapy.

Chemical Components

Anthraquinone, cardiac glycosides, steroids, volatile oils, saponins, stigmast-4ene-3,6dione, anthocyanins.

Uses

Clitoria ternatea has historically been used for anti-diarrheal, anti-helmintic, anti-bacterial,[33] anti-fungal, [34] and anti-bacterial purposes [35], antioxidants, anti-inflammatory, anti-hyperlipidemic, anti-pyretic, immunomodulatory, wound-healing property, renal, and urogenital disorders [36]. Also use as sun-protection.

Figure 4. Butterfly blue pea.

Experimental Work

Preparation of Extract

To prepare the plant's fresh leaves for further extraction, they were removed, cleaned with water, and mashed into a paste.

Extraction With Water

- 300g of fresh A marmelos leaves were taken.
- The leaves were extracted with water for twelve hours at room temperature.
- Maceration method was used for extraction.
- After 12 hours, the supernatant was removed.
- The extract was make to use formulation of cream (shown in Figure 5).

FORMULATION OF CREAM

1. Using a borosilicate glass beaker, keep the liquid paraffin and beeswax heated to 750°C (Oil phase).
2. While maintaining the water bath at 750°C, borax and propyl paraben should be dissolved in distilled water in a separate beaker. Mix the mixture. Until all of the solid particles have been dissolved using a glass rod (Aqueous Phase).
3. Next, slowly mix in the heated oily phase while adding the heated aqueous phase. Aloe vera gel, neem extract, and turmeric extract should be added right away after the two phases have been thoroughly mixed.
4. Stir with a glass rod until a smooth cream forms.

5. Add the rose oil for scent once the cream has formed.
6. After that, spread the cream out onto a slab and stir it in a geometric pattern to ensure that all the ingredients are well combined and the texture is smooth. If necessary, add a small amount of purified water.
7. This process for making cream (Figure 6) is known as the slab technique or the impromptu method.

Figure 5. Extract.

Figure 6. Cream.

EVALUATION AND PARAMETER

Irritancy

Mark an area of a cm2 on the left dorsal surface. The cream was then applied to the region and the duration was recorded. Any subsequent erythema, edema, or irritation is noted and monitored for a maximum of 24 hours.

Ability to Wash

After rinsing the hand with tap water, a small amount of cream was applied.

pH

The pH of 0.5 g of cream that had been dispersed in 50 ml of distilled water was measured using a digital pH meter (Figure 7).

Viscosity

Using a Brooke field viscometer at 25 °C and spindle number 63 running at 2.5 RPM, the viscosity of the cream was measured.

Phase Division

The cream products were stored in a closed container at temperatures between 25 and 100°C and under light conditions. Phase separation was then monitored 24 h over 30 days. Phase separation variations were recorded and confirmed.

Spread Ability

The spreadability was calculated as the duration in seconds needed for two slides divided by a cream layer to separate under a certain stress. In order to separate the two slides more quickly, the spreadability (Figure 8) must be improved (Table 2). We picked up two full-sized sliding glasses. Then, the cream mixture was applied on a slide of appropriate size. Following that, the formulation was covered by another slide. Applying a weight or other load to the upper slide allowed the cream between the two slides to be uniformly squeezed into a thin layer.

Figure 7. **pH**.

Figure 8. Spread ability.

RESULT

1. The pH measurements of the multipurpose cream is 7.3. It is similar to pH of skin.
2. The viscosity measurement of the multipurpose cream is 48 cp.
3. The spread ability measurement of the multipurpose cream is 3.0 gmcm/sec in 5 sec.

Table 2. Evaluation of the Physical and Functional Properties of the Multipurpose Cream, Including pH, Viscosity, Spreadability, and Other Quality Indicators.

Test	Poor	Good	Very Good	Excellent
Irrantancy				✓
Wash ability			✓	
pH		✓		
Viscosity		✓		
Phase Separation			✓	
Spread ability			✓	

CONCLUSION

As a result of the study's findings, Aegle marmelos's versatile qualities on the skin were investigated. Finally, it can be said that Aegle Marmelos extract makes the skin more hydrated. It works well as a mosturising agent in cream formulations.

The cream had a multipurpose impact with the usage of Neem, Aegle Marmelos, Amla, Rosewater, and Butterfly Blue Pea; each of the herbal constituents demonstrated distinct and noteworthy actions. The results suggest that the formulation is safe to apply to the skin and that it was stable at room temperature.

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