
FORMULATION AND EVALUATION OF HERBAL CREAM

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ABSTRACT

Since the beginning of time, creams have been valued as essential topical preparations in cosmetic products because of how simple it is to apply and remove them from the skin. Pharmaceutical creams are used for a number of aesthetic purposes, including cleansing, beautifying, modifying look, moisturising, etc. They also protect the skin from bacterial and fungal infections and can be used to treat skin injuries including burns, cuts, and wounds. The general population and society can safely employ these semi-solid preparations. The products used to enhance and beautify human appearances are known as herbal cosmetics. The current study's objective was to design and assess herbal creams that contained plant extracts made utilising the water in oil method for the goal of moisturising and nourishing the skin. Extracts are used to make the herbal cream. Utilising several evaluation techniques, the created product's quality was evaluated. The physical characteristics of the cream formulation did not alter. During the research study period, the cream formulation demonstrated good consistency and spreadability, homogeneity, pH, non-greasy properties, and no signs of phase separation. There was no discernible change in the created cream's viscosity, aroma, or visual appearance during the research period, according to stability measures. As the water in the emulsion slowly evaporates, the cooling and calming effects of the herbal extract with HERBAL CREAM are produced. HERBAL CREAMS are more moisturising because they create an oily barrier to stop the loss of water from the stratum corneum, the outermost layer of the skin. They are water-in-oil emulsion and intended for application on skin or accessible mucous membrane to provide localized and sometimes systemic effect at the site of application.

KEYWORDS: Beeswax, Paraffin.

I. INTRODUCTION

Cosmetics are the products which are generally used to beautify the skin and also to purify the skin. The cosmetics are the word derived from Greek word – ‘kosmeticos’ which means to adorn. From that time the materials which are used to promote appearance or to beautify the skin are called as cosmetic. From ancient time till now people are still using polyherbal or herbal cosmetics for the beautification of skin. HERBAL CREAM is the water in oil emulsion. HERBAL CREAM gives the prolonged contact time in the site of application as compared to the other semisolid dosage form or formulation. They give elegance to the skin and it is not that much greasy. Due to the oil phase, it gives an emollience to the skin. The function of the HERBAL CREAM is for restoring moisture to dry skin, it allows to eliminate the waste materials from the pores and also cool the body. It is easily watered washable and easy to wash away. They are non-irritating when applied on the skin. The water phase provides the skin with additional protection. At body temperature, it becomes liquefiable. It enters the skin through the pores of the skin's epidermis. Galen, a Greek physician who created the HERBAL CREAM formulation in the second century, is credited with developing it. He made a mixture of water, beeswax, and rose petals. These were the main moisturiser components he used to create the HERBAL CREAM. Galen's cream was the common name for this skin lotion. HERBAL CREAMS can be used to remove temporary tattoo marks and then removed with a cotton ball in addition to moisturising the skin. Uses of HERBAL CREAMS are also related to the creation of children's face paint [1].



Fig. 1: Borax.

Borax, combined with wax, is used in many cosmetic products like creams, gels, and lotions. It is famously used in hand soaps to help wash off the oil or grease from the hands. Borax's alkaline nature makes it a perfecting ingredient in cleansers and toners. In cosmetic products, borax is sometimes used as an emulsifier, buffering agent, or preservative for moisturizing products, creams, shampoos, gels, lotions, bath bombs, scrubs, and bath salts. Borax is also an ingredient

combined with glue and water to make “slime,” a gooey material that many kids enjoy playing with. From creams and body lotions to shampoos, bath gels and even the in-vogue bath bombs, just about every product associated with skin care has Borax as one of its components. Given its mild and antiseptic nature, quite a few natural cosmetic products tend to include Borax as an essential ingredient as well.



Fig.2: Beewax.

Ability to Protect from Irritants- Beeswax can also act as a layer of protection when applied to the skin. It can protect skin from environmental irritants and extreme weather.

Promotion of Hair Growth- Beeswax not only moisturizes and soothes hair, but it can keep moisture from getting out of the hair. Beeswax can create a protective layer on the skin. It's also a humectant, which means that it attracts water. Both of these qualities can help the skin stay hydrated. Beeswax is also a natural exfoliator, ideal for sloughing away dead skin cells. Beeswax heals and softens skin, and is an antibacterial agent. It can help you fight conditions like acne, dry skin, eczema, and stretch marks. Our raw beeswax can help you create your own skin care moisturizers and lotions specially formulated just for you.



Fig. 3: Rosewater.

Rose water is especially hydrating when combined with other moisturizing ingredients, such

as ceramides or glycerin. “These help to moisturize the skin, protect the skin barrier and prevent further water loss from the skin,” says Allawh. However, it shouldn't replace your current moisturizer. Rose water has been used as a beauty product for thousands of years, so it's no surprise that it can improve your complexion and reduce skin redness. The antibacterial properties may help reduce acne. The anti-inflammatory properties can reduce skin redness and puffiness. Rose Water Maintains the Skin's Natural pH Balance. Chemically produced soaps and cleansers disrupt the pH balance of our skin, making it prone to bacteria that cause various skin conditions like rashes and acne. This property helps rose water restore the skin to its normal pH level.

II. TOPICAL DRUG DELIVERY

The administration of medications to the human body through a variety of routes, including oral, sublingual, rectal, parental, topical, inhalation, etc., has been used to treat illnesses during the past few decades. Topical delivery is the application of a drug-containing formulation to the skin to treat a cutaneous disorder or the cutaneous manifestation of a general disease (such as psoriasis) directly with the goal of containing the pharmacological or the effect of the drug to the surface of the skin or within the skin. Semisolid formulations in all their variety dominate the system for topical delivery, but foams, spray, medicated lotions, and other forms of topical administration are also used.

Advantage:

- Preventing of first pass metabolism.
- Convenient and simple to use.
- Prevention of risk.
- The drawbacks of intravenous therapy and the various conditions of absorption, such as pH changes, the presence of enzymes, the rate at which the stomach empties, etc
- Continuous drug input can achieve efficacy with a lower total daily dose of medication
- Prevent intra- and inter-patient fluctuations in medication levels
- The medicine or its excipients may cause skin irritation or dermatitis

III. PREPARATION OF HERBAL CREAM

Prior to the first century, numerous druggists would prepare rose water cream and keep it chilled on ice so that it would be suitable for use as a skin cream. Since the water in HERBAL CREAM evaporates when applied, it produces a cooling sensation, thus the Latin word “refrigeran”

(meaning “making herbal cream”). Galen, a renowned Greek physician and chemist who worked in Rome during the First Century AD’s Roman Empire, is credited with creating the first HERBAL CREAM. Over many centuries, the proportions and preparation procedure of the Galen HERBAL CREAM formula have seldom changed. It is ideal for treating dry skin on the knees, feet, and elbows as well as for using as a natural makeup remover and preventing eczema in dry areas of the body. The cream gets its name from the fact that it feels like herbal cream to the touch. People use it to soften their skin, calm sunburns, and protect their faces from harsh weather, among other things. The combination of fats and water in this product helps moisturise. Unlike the “oil in water” type emulsion of vanishing cream, which is so-called because it appears to vanish when applied to skin, the emulsion is of the “water in oil” kind. An example of a HERBAL CREAM is a lubricating cream, often known as a night cream or massage cream, which contains lanolin and its derivatives. The term “HERBAL CREAM” refers to the numbing sensation the cream left behind on the skin. Water in oil (w/o) emulsions were typically used to create HERBAL CREAMs. Much of the water in the cream evaporates after they are applied to the skin, leaving the residual oil to function as a solvent, clearing the skin of makeup and other impurities. Additionally, surfactant activity might exist. According to some chemists, the cooling effect of the water evaporation on the skin is the reason why these creams are referred to as “HERBAL CREAMs”. Another argument is that the creams required to be stored in a cool environment to prevent them from growing rancid in the days before mineral oil or Petrolatum were utilised. They acquired their moniker because of how frigid they felt to the touch. Galen, a Roman physician who lived around 150 CE, is credited with creating the first HERBAL CREAM by blending water with molten beeswax and olive oil. It took a lot of mixing to make it, and when it stood, it tended to split. The recipe, which typically uses rosewater and/or oil of roses as a perfume, continued nonetheless, and was included in the first edition of the “pharmacopoeia Londinensis” in 1618. Early versions were not durable because vegetable oils, including almond oil, are susceptible to deterioration when combined with water. HERBAL CREAMs were typically prepared at home or bought in small quantities freshly prepared by a neighbourhood pharmacy, chemist or druggist because of their limited shelf life.

Table1:Ingredients Use din HERBAL CREAM.

Ingredients	Quantity taken(20gm)	Use of ingredients
Bees wax	2gm	Emulsifying agent
Borax	1.05gm	Emollient
Aloe vera	1 gm	Preservative
Liquid paraffin	5 ml	Laxative
Rose Water	2.9 ml	Diluent

APPARATUSUSED:

- Measuring cylinder
- Spatula
- Pipette
- Water bath
- China disc
- Glass rod
- Thermometer

RAW MATERIALS USED: Mineral and vegetable oils, together with fatty alcohols, fatty acids, and fatty esters, emulsifying agents, preservatives, and filtered water, can all be used to create HERBAL CREAMS. There should be the following four main components:

- Oil
- Water
- Emulsifier
- Thickening Agent

IV. HERBAL CREAM

For good reason its hydrating benefits HERBAL CREAM has had a modern renaissance. Dry skin is a result of the herbal cream weather, and HERBAL CREAMS are fantastic for dry skin. Water and oil are emulsified to create HERBAL CREAM. The difference between water and oil is significant to the formulation of the HERBAL CREAM recipe since it causes the skin to feel herbal cream when applied, hence the name. This is due to the fact that HERBAL CREAM absorbs more slowly into the skin than oil and water products do. The four main components of

HERBALCREAM are typically water, oil, an emulsifier, and a thickening agent. The cream can reach the outer layer of skin without being absorbed as deeply into your skin as water-based treatments because water and oil are mixed in roughly equal amounts. As a result, when used as a nocturnal skin treatment, it feels more like an overnight mask than a moisturiser.[9]

IDEAL CHARACTERISTICS OF HERBAL CREAM

- Normally, it shouldn't be diluted.
- The HERBAL CREAM's pH should ideally range from 4.6 to 6.0.
- It should have the ideal consistency to allow for easy application and removal from the container.
- Following external application, the skin should experience a cooling effect.
- To prevent water from evaporating from the skin's surface, it must create a thin, waxy protective coating on the skin.
- Should have a quicker emollient action so that extremely dry skin can quickly expand and soften.
- Ointments tend to be more oily.

THE FOLLOWING SEVERAL TEST MAY PERFORM TO EVALUATE THE QUALITY OF HERBAL CREAM.

- **Morphological Evaluation:** This refers to the manual evaluation of a nice cream's physical characteristics based on its colour, flavour, and texture.
- **pH:** In order to calibrate the pH metre, standard buffer solution was used. With the aid of a digital pH metre, weigh 0.5 g of cream and dissolve it in 50.0 ml of purified water.
- **Test for Spreadability:** The cream sample was placed in between the two glass slides and compacted to a uniform thickness by applying weight for five minutes before adding more weight to the weighing pan. The spreadability was measured by the amount of time the upper glass slide travelled across the lower slide.
- **Stability Test:** A month-long stability test was conducted on the developed formulation by storing it at various temperatures. While being maintained at various temperatures, including room temperature and 40°C, the packed glass vials of formulation were examined for physical traits such as colour, aroma, pH, consistency, and feel.
- **To Test for Irritability,** mark a 1-square-centimeter region on the left dorsal surface. The cream was applied to the designated region, and the duration was recorded. The presence of irritation was monitored for up to 24 hours at regular intervals.
- **Homogeneity:** The homogeneity was examined visually and tested.[10]

V. RESULT

Morphological Evaluation: A morphological evaluation of HERBAL CREAM is shown in the Table. Formulation was white. The produced formulations' pleasant and well-acceptable flavour makes them ideal for cosmetic formulations. Smoothness and texture was suitable for cosmetic formulation requirements.

Table2: Data of Morphological Evaluation.

Morphological parameter	Results
Color	White
Odour	Pleasant
Texture	Fine

pH: The pH is found to be neutral and shown in table as

Table3:3pH test.

pH	7.3
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Stability: The stability results were displayed in Table. No change in colour, smell, texture, or smoothness was noticed under the stability parameters stated. The stability research indicated that at normal temperature.

Table 4: Stability Testing.

Stability parameter	Result
Color	No change
Odour	No change
Texture	No change
pH	No change

Irritancy Test: The table below displays the results of the irritancy test. During irritancy trials, the formulation displayed absence of irritation, redness, and edema. This formulation is skin safe for usage.

Table5: Result of Irritancy Test.

Irritancy test	Result
Irritation	No
Edema	No
Redness	No
Swelling	No

Spreadability: The Spreadability of HERBAL CREAM was shown in table and found to be Table 6: Result of Spread ability Test

Formula	Average spreadability
FI	6.5

Homogeneity: The homogeneity of HERBAL CREAM was quite good enough.

VI. CONCLUSION

The created cream demonstrated good consistency and spread ability, homogeneity, pH, nongreasiness, and there was no phase separation during the research period, according to the aforementioned data. The purpose of HERBAL CREAM is to moisturise dry skin and cool the body while also removing waste from pores and pores. It is simple to wet, wash, and put away. When used on the skin, they do not irritate. The skin receives additional conservation from the water phase.

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