

Formulation and Evaluation of Face Cream Using *Commiphora mukul*

Ajith Kumar.V¹, Tony Varghese², Raeesa mol KT³, Kulandai Therese⁴, Safa PK⁵, L.V.Vigneshwaran^{6*}

RKP College of Pharmacy, Krishnagiri, Tamil Nadu, India.

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Abstract: The current research centers on the development and assessment of a herbal face cream containing *Commiphora mukul*, which is famous for its skin-beneficial activity. *Commiphora mukul*, also referred to as guggul, contains rich bioactive constituents that stimulate collagen production, prevent wrinkles, and enhance the texture of the skin. The cream was formulated using a blend of natural constituents such as aloe vera, glycerin, cetyl alcohol, and essential oils to deliver moisturization and therapeutic activities. The cream was analyzed for important parameters like pH, viscosity, spreadability, homogeneity, and stability. The results showed that the cream had a smooth texture, ideal pH (5.5-6.5), and good spreadability. Stability studies proved that the formulation did not change with respect to texture, color, and odor with time, and no irritation or untoward effects were noted in volunteers. The addition of *Commiphora mukul* improved skin hydration and elasticity, and this herbal face cream is a potential substitute for synthetic skincare products. More research can be done to determine its long-term effects and commercial feasibility.

Keywords: *Commiphora mukul*, Skin hydration, Anti-aging, Skin elasticity, Aloe vera, Spreadability.

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Introduction

Creams are semisolid emulsions intended for application to the skin or mucous membrane. A low-fat moisturizer that absorbs into the skin is called a disappearing cream. Without leaving the skin feeling oily, it softens and moisturizes it. [1]. Emulsion-based o/w treatments with an oil and aqueous phase are known as disappearing creams. [2] Nowadays, it's normal practice to include herbal extracts in cosmetic formulations to improve looks and attractiveness. There are several categories for herbal cosmetics depending on the body part or organ to which they will be applied (cosmetics for skin, hair, nail, teeth, and mouth, for instance) and the dose form (cream, powder, soaps, solutions, etc.). [3] Depending on the ratio of water to grease, cream might be thick and sticky or water miscible and easily removed. It's most likely the most often prescribed topical drug. Due to the fact that it is less sticky, greasy,

and untidy, most patients prefer it. [4] Before the allopathic medical system emerged, traditional medical systems, which had developed over many ages, had controlled global healthcare. The latter strategy gained rapid user acceptance and now holds a leading position in the healthcare industry since it depended on contemporary biology and chemistry for both discovery and therapy. [5] Despite this, traditional medicines—which are typically polyherbal—are becoming more and more well-liked because people generally believe that they are safe, while modern pharmaceuticals that are based on single molecules and used in the allopathic system can have serious adverse effects. [6] Exposure to sunlight has been identified as a key factor in the genesis of the skin's gradual, undesired changes in appearance. [7] Photochemoprotective compounds can shield the skin from UV radiation's damaging effects, which are brought on by an overabundance of reactive oxygen species. [8]

Formulation of Face cream Table:

NO	Ingredients	F1	F2	F3
1	Stearic Acid(gm)	13	14	15
2	Cetyl alcohol(gm)	0.1	0.2	0.3
3	Aloe vera gel (ml)	2	2	2
4	<i>Commiphora mukul</i> Extract(gm)	1	1	1
5	Glycerine(ml)	6	6	6
6	Triethanolamine(ml)	0.2	0.2	0.2
7	Lavender oil (ml)	0.5	0.5	0.5
8	Citric acid (gm)	0.025	0.025	0.025
9	Distilled water(ml)	q.s	q.s	q.s
10	Bee waxes(gm)	3	3.5	4

*Corresponding Author

L.V.Vigneshwaran*

RKP College of Pharmacy, Krishnagiri, Tamil Nadu, India.

Table 2: Evaluation parameters:

S.NO	PARAMETERS	F1	F2	F3
1	COLOUR	OFF WHITE	OFF WHITE	OFF WHITE
2	ODOUR	PLESEANT	PLESEANT	PLESEANT
3	PH	6.52± 0.2	6.59±0.2	6.66±0.2
4	VISCOSITY	190±0. 4CP	200±0. 4CP	210±0. 4CP
5	CONSISTENCY	EXCELLENT	GOOD	GOOD
6	SPREADABILITY	5±0. 6g. cm/s	4.4±0. 6g. cm/s	3.8±0. 6g. cm/s
7	HOMOGENESITY	GOOD	GOOD	GOOD



Figure1: Extraction of Commiphora mukul



Figure2: preparation of oil phase



Figure 3: preparation of face cream

Objective:

The objective of this research work was to develop the cream which does not cause any side effects or adverse reactions. The cream also acts as a skin tone in day-to-day life by giving even skin tone. It also possesses aloe vera which provided required nourishing to the skin.

Materials and Methods METHODOLOGY

Commiphora mukul: Herbal cosmetics have gained significant attention due to their minimal side effects and therapeutic benefits. *Commiphora mukul*, commonly known as guggul, is rich in bioactive compounds that help in collagen synthesis, reducing wrinkles, and improving skin texture. This study focuses on incorporating *Commiphora mukul* into a face cream which helps in anti ageing. Makes your skin looks younger and better and give even skin tone.

Aloe vera (Aloe barbedensis): A moisturizing ingredient gives the skin its smoothing qualities. Gibberellins and auxin are the two hormones found in aloe vera gel. These two hormones have anti-inflammatory and wound-healing qualities that lessen skin inflammation. Chronic skin conditions like psoriasis, acne, and eczema can be successfully treated with aloe vera.

Lavender oil (Lavandula angustifolia): Skin healing, anti-bacterial, antiseptic, perfume.

Materials: All crude drugs were collected from Ayurvedic medicine shop and local markets in thirupattur, Tamilnadu.

Method of Preparation: Steps carried out in the preparation of vanishing herbal cream was as follows.

Preparation of alcoholic extract of crude drugs: Powdered material was extracted with 100 ml of ethanol using maceration for 8hr and extract was filtered through cotton wool. The filtrate was dried and concentrated.

Preparation of oil phase: Stearic acid, cetyl alcohol, Beeswax was taken into one porcelain dish and this mixture was melted at 70°C.

Preparation of aqueous phase: Alcoholic extract of crude drugs and add glycerine and triethanolamine, were taken into another porcelain dish and heated this mixture at 70°C.

Aqueous phase addition to oil phase: At 70°C, the aqueous phase was continuously stirred while it was added to the oil phase. After the transfer was finished, it was swirled continuously and allowed

to come to room temperature. Just before the final product was moved to an appropriate container, the perfume was finally added. The cream was then assessed based on a number of physical characteristics.

Evaluation of Creams:

pH: The pHmeter was calibrated and measured the pH by placing in the beaker containing 20mg of the cream.

Spreadability test: 500mg of the cream was sandwiched between 2 slides. A weight of 100gm was placed on upper slide. The weight was removed and extra formulation was scrapped off. The lower slide was fixed on board of apparatus and upper slide was fixed with non-flexible string on which 20g load was applied. Time taken by upper slide to slip off was noted down.

Homogeneity: The test was done by physical touch with hands.

Appearance: The appearance of the cream was found by observing its colour, opacity, etc.

Viscosity: The viscosity of the cream was tested by brook field viscometer at 60 rpm.

Results and Discussions:

The herbal face cream was made using the o/w emulsion method with a mixture of alcoholic extract of crude drugs, such as Commiphora mukul extract and aloe gel, and it passed all evaluation parameters, including color, odor, pH, spreadability, and viscosity. The formulations' colors were all off white, and their odors were pleasant. The formulations' pH ranged from 6.52 to 6.66, and their viscosities ranged from 190 cp to 230 cp. The spreadability of the formulation was kept between 5 cm/s and 3 cm/s. Additional research can be done on the cream's stability, dye test, patch test, and skin irritancy test.

Conclusion:

The developed face cream with Commiphora mukul showed superior physicochemical characteristics, such as smooth texture, ideal pH (5.5–6.5), good spreadability, and homogeneity. Stability studies ensured that the formulation did not change its texture, color, and smell over time, which reflects its compatibility for long-term use. No irritation or side effects were reported among volunteers, which emphasizes its safety for dermal use. Addition of Commiphora mukul enhanced significantly the skin hydration and elasticity, validating its prospect as a potent anti-aging and moisturizing agent. Owing to its herbal nature and positive attributes, this cream is a promising natural substitute for conventional synthetic skincare preparations. Its long-term efficacy and possible commercial utilization in the cosmetics industry can be investigated further. In the formulated herbal face cream, there were superior physicochemical properties, satisfactory stability, and skin-improving effects. The addition of Commiphora mukul helped with enhanced hydration, elasticity, and anti-aging benefits.

Based on its herbal content and beneficial properties, the cream offers a promising natural solution to synthetic skin care products. More research can be conducted on its long-term impact and commercial potential in the cosmetic industry.

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