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A Review on Herbal Moisturizing Cream

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Abstract: *The demand for natural ingredients and extracts in different formulations was driven by the use of herbal herbs and products for their aromatic properties in developing herbal products for consumers. Creams are a semi-solid mixture that is applied by rubbing on the skin. They are applied to the skin using an absorbent material for medicinal and cosmetic purposes. This review focuses on discussing herbal creams and the common herbal plants used to make them. Herbal creams offer numerous advantages in comparison to synthetic creams. Most moisturizers currently on the market offer greater advantages and are crafted from synthetic medications, yet they also come with various negative side effects like irritation and allergic responses. Herbal moisturizing creams do not have these negative effects, nourishing the skin effectively. The following text will be paraphrased while maintaining the original language and word count. The sole reason for selecting the blend of herbal ingredients was to uphold the authenticity. efficacy of these formulations without causing any adverse reactions*

Keywords: Herbal moisturizer, Medicinal Herbs, Hydration, Semisolid dosage forms

I. INTRODUCTION

The Greek word "kosmesticos," which meaning "to adorn," is the source of the English term "cosmetic." Since then, any substance utilized to enhance or beautify appearance has been referred to as cosmetic. In actuality, the word "cosmetics" originated in Ancient Rome. Usually, they were made by female slaves referred to as "cosmetics," which is how the word "cosmetics" originated. The purpose of cosmetics is to improve attractiveness. The history of makeup spans several centuries. Creams are emulsions that are semisolid and are meant to be applied to the skin or mucous membranes. The cream might be thick and sticky or water-miscible and easily removed, depending on the water to grease ratio. [1,3]

Cosmeceuticals: Cosmeceuticals describe those products that are marketed as cosmetics but have Drug like effects.
Cosmeceuticals = Cosmetics + Pharmaceutics

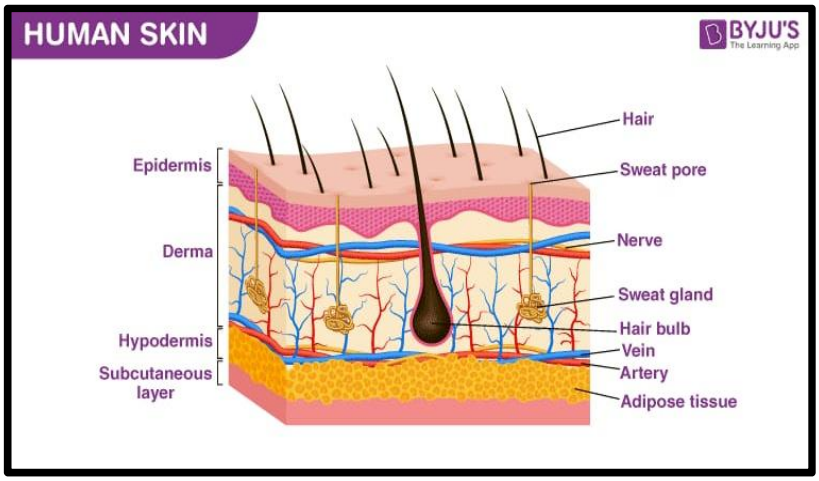

Fig-1 Human skin

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The human skin is the largest organ and a sensory organ in addition to an organ. Its thickness is not constant. The skin is typically between one and two millimeters thick. Three layers make up skin: the dermis, which houses the appendages and acts as a barrier against infection; the epidermis which provide waterproofing The subcutaneous adipose layer of the hypodermis.

EPIDERMIS: Stratified epithelium, which is composed of five layers, forms the skin's epidermis.

a) The stratum corneum
b) The Lucidum Stratum
c) The Granulosum stratum
d) Spinosum stratum
e) The germinal stratum

CREAMS:

The topical medications that can be applied to the skin are called creams. Creams are characterized as thick liquid or semi-solid dosage forms that vary in viscosity depending on the type of oil and water they include.[4] Creams are applied cosmetically for functions such washing, beautifying, enhancing look, protecting, or therapeutic. These topical preparations are intended to deliver drugs locally, into the mucous membrane or the skin's underlying layer. These treatments are intended to be applied topically to improve the drug's site-specific delivery to the skin for skin conditions.[5,6]

Since creams are made using methods developed in the pharmaceutical business, they are regarded as pharmaceutical products. Both medicated and unmedicated creams are widely used to treat dermatoses and other skin problems. People can utilize creams that are allopathic, herbal, or ayurveda based on the demands of their individual skin issues. They include one or more drug ingredients that have been diluted or spread in an appropriate foundation. Based on phases, creams can be categorized as either w/o or o/w types of emulsion.[7]

Types of cream

Oil-in-water (O/W) Creams: 1. Creams that consist of small oil droplets distributed in a continuous phase are referred to as oil-in-water (O/W) creams. Whereas, an emulsion containing oil droplets dispersed across the aqueous phase is referred to as an oil-in-water (O/W) emulsion [8]

Water-in-oil (W/O) Creams: creams consisting of water combined with oil in a continuous phase, are referred to as waterin-oil (W/O) creams. The emulsion is considered to be water-in-oil (W/O) type when the dispersed phase is water and the dispersion medium is oil.[9]

IDEAL CHARACTERISTICS [10]

1. Good penetration capabilities, enabling the cream's drug to seep into the skin and have the desired effect.
2. To avoid unwanted skin reactions like itching, rashes, or redness, it shouldn't be toxic.
3. It should flow readily across skin when applied
4. It should melt or liquefy at body temperature when applied to skin.
5. Don't irritate the skin or cause inflammation of it

ADVANTAGES

1.Ease of application.
2. Simple to use.
3. Avoiding hazardous situations.
4. No particular risk or technician is required for application.
5. Prevent changes in drug levels when there are variations between and within patients.
6. Excellent compliance with treatment [11,12]

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Moisturizer:

A moisturizer, also known as an emollient, is a cosmetic preparation that lubricates, protects, and moisturizes the skin. The sebum that healthy skin produces typically carries out these tasks. The Latin verb mollire, which means to soften, is where the word "emollient" originates. Transepidermal water loss (TEWL) is the term for the process by which water continuously evaporates from the skin's deeper layers in the human body. Human skin naturally keeps a dry, readily shed surface as a barrier against viruses, filth, or harm by controlling its water content. It also prevents itself from drying out and becoming stiff and brittle. The lipid bilayer that separates the corneocytes determines their capacity to hold onto moisture. The active components of moisturizers, which are classified as either occlusives or humectants, alter the rate at which water is lost. [13]

Uses:

Moisturizers are used for the treatment of certain skin diseases, such as psoriasis, ichthyosis vulgaris, xerosis, and pruritus in atopic dermatitis. More often, they are bases or vehicles for topical medication, such as in Whitfield's ointment. They are often combined with humectants, such as salicylic acid and urea

Moisturizers are also widely used in sunscreens, antiperspirants, skin cleansers, shaving creams, aftershaves, and hair tonics.

Moisturizers are used in disposable napkins to prevent dry skin and napkin dermatitis [14]

Advantages of mosturizers:

Mosturizing reduces the chances of skin problems.
Mosturizing can reduce the appearance of other blemishes.
Mosturizing helps your skin stay young.
Mosturizing fights wrinkles.

Disadvantages of moisturizers

Over –moisturization
Allergens
Fire risk

INGREDIENT

Clove
Neem
Turmeric
Amla
Bees Wax
Liquid paraffin
Borax
Methylparaben
Rose oil [15]

Clove:

Clove (Syzygium aromaticum) is a spice derived from the flower buds of the clove tree, native to the Maluku Islands in Indonesia.

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Fig-2 clove

Classification

-Kingdom: Plantae
- Family: Myrtaceae
- Genus: Syzygium

Plant Description:

- Evergreen tree
- Height: 10-20 meters (33-66 feet)
- Spread: 5-10 meters (16-33 feet)
- Bark: Greyish-brown, smooth
- Leaves: Dark green, oval-shaped, 5-10 cm long
- Flowers: White, fragrant, in clusters

Chemical Composition:

- Volatile Oils (15-20%):
- Eugenol (70-90%): Antimicrobial, anti-inflammatory
- Beta-caryophyllene (5-10%): Antioxidant, anti-inflammatory
- Humulene (2-5%): Antimicrobial, anti-inflammatory
- Non-Volatile Compounds:
- Flavonoids (kaempferol, quercetin): Antioxidant
- Phenolic acids (gallic, ellagic): Antioxidant
- Tannins: Astringent, antimicrobial

Therapeutic Uses:

1. Dental care: Relieves toothache, gum inflammation, and bad breath.
2. Respiratory issues: Treats cough, cold, and bronchitis.
3. Skin conditions: Soothes acne, wounds, and insect bites.
4. Digestive issues: Alleviates nausea, vomiting, and diarrhea.
5. Pain relief: Relieves headaches, muscle pain, and arthritis.
6. Stress and anxiety: Promotes relaxation and reduces stress

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2. Neem:

Fig-3: Neem

Classification
- **Kingdom:** Plantae
- **Family:** Meliaceae
- **Genus:** Azadirachta

Plant Description
- **Evergreen tree**
- **Height**: 15-20 meters (49-66 feet)
- **Spread:** 10-15 meters (33-49 feet**)**
- **Bark:** Greyish-brown, rough
- **Leaves:** Compound, dark green, 20-40 cm long
- **Flowers:** White, fragrant, in clusters
- **Fruits:** Yellow, drupe, 2-3 cm long

Chemical Composition
1. Azadirachtin (0.5-1.5%): Insecticidal, anti-inflammatory
2. Nimbin (10-20%): Anti-inflammatory, antimicrobial
3. Nimbidin (10-20%): Antimicrobial, antioxidant
4. Quercetin (2-5%): Antioxidant, anti-inflammatory
5. Gallic acid (2-5%): Antimicrobial, antioxidant

Therapeutic Uses
1. Insecticidal
2. Antimicrobial
3. Anti-inflammatory
4. Antioxidant
5. Anticancer
8. Dermatological

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3. Turmeric

Fig-4 Turmeric

Classification:
- **Kingdom:** Plantae
- **Family**: Zingiberaceae
- **Genus:** Curcuma
- **Common names:** Turmeric, Yellow ginger, Indian saffron

Plant Description:
- Rhizomatous perennial herb
- Height: 0.5-1.5 meters (1.6-4.9 feet)
- Leaves: Lance-shaped, dark green, 30-40 cm long
- Flowers: Yellowish-white, in spikes
- Rhizomes: Yellow-orange, branched

Chemical Composition:
- Curcumin (1-5%): Anti-inflammatory, antioxidant
- Demethoxycurcumin (DMC): Anti-inflammatory, antioxidant
- Bisdemethoxycurcumin (BDMC): Anti-inflammatory, antioxidant
- Volatile oils (turmerone, atlantone)
- Flavonoids (quercetin, kaempferol)
- Polysaccharides

Therapeutic uses :
1. Anti-inflammatory: Arthritis, gout, joint pain
2. Antioxidant: Cancer prevention,
3. Antimicrobial: Wound healing, skin infections
4. Digestive: Indigestion, diarrhea, bloating
5. Respiratory: Cough, cold, bronchitis
6. Skin conditions: Acne, psoriasis, eczema

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4. Amla:

Fig-5: Amla

- Classification:
-Kingdom: Plantae
- Family: Phyllanthaceae
- Genus: Emblica
- Common names: Amla, Indian gooseberry, Amalaki

Plant Description:
- Small to medium-sized deciduous tree
- Height: 8-18 meters (26-59 feet)
- Spread: 5-10 meters (16-33 feet)
- Bark: Greyish-brown, smooth
- Leaves: Simple, alternate, 2-5 cm long
- Flowers: Yellowish-green, in clusters
- Fruits: Small, greenish-yellow, spherical

Chemical Composition:
- Ascorbic acid (Vitamin C): 1,000-3,000 mg/100g
- Tannins (emblicanin, punigluconin)
- Flavonoids (quercetin, kaempferol)
- Alkaloids (embelin)
- Phenolic acids (gallic acid, ellagic acid)
- Fiber

Therapeutic Uses:
1. Anti-inflammatory: Reduces inflammation, alleviates pain
2.Anti-aging: Promotes skin health, reduces wrinkles
3. Digestive: Enhances digestion, relieves constipation
4. Respiratory: Treats cough, cold, bronchitis
5. Cardiovascular: Lowers cholesterol, blood pressure
6. Immune system: Boosts immunity

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5. Bees Wax

Fig-6 Bees wax

Synonyms- Yellow wax, Cera alba

Biological Source – Obtained from the honey comb of the bees Apis mellifera and other species of Apis
Family- Apidae

Chemical composition – It consists of esters of straight chain monohydric alcohols with straight chain acids
Constituents is myricin such as myricyl palmitate 80%
Cerotic acid 15%,melissic acid and aromatic cerolein

Uses:

In preparation of ointment, plasters and polishes
Also used in manufacturing of candles
Also used in electronic industries
Also used in cosmetics such as lipsticks,face cream
Is an ingredient of paraffin ointment

Cosmetic and Personal Care:

1. Skincare products (moisturizers, creams, lotions)
2. Hair care products (hair wax, pomades)
3. Lip balms and lipsticks
4. Soaps and candles
5. Perfumes and fragrances.

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6. Liquid paraffin:

Liquid paraffin, also known as mineral oil, has various uses across different industries

Fig -7 Liquid paraffin

Cosmetic and Personal Care:

1. Skin moisturizers and lotions
2. Hair care products (conditioners, hair oils)
3. Makeup removers and cleansers
4. Perfumes and fragrances
5. Baby oils and lotion

Pharmaceutical Use:

1. Topical applications (skin creams, ointments)
2. Oral medications (lubricant, excipient)
3. Veterinary medicines

7. Methyl paraben

Methyl paraben is a widely used preservative in various industries

Fig-8 Methylparaben

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Cosmetic and Personal Care:

1. Skin care products (moisturizers, creams, lotions)
2. Hair care products (shampoos, conditioners)
3. Oral care products (toothpaste, mouthwash)
4. Makeup products (foundations, eyeshadows)
5. Fragrances and perfume

Pharmaceutical Use:

1. Topical creams and ointments
2. Oral medications (tablets, capsules)
3. Injectables (vaccines, antibiotics)
4. Eye drops and ointments.

7. Rose oil:

Rose oil, extracted from rose petals, has various uses

Fig-8 Rose oil

Cosmetic and Personal Care:

1. Skincare: Anti-aging, moisturizing, and soothing
2. Perfumes and fragrances
3. Hair care: Conditioning, nourishing, and fragrant
4. Soaps, lotions, and creams
5. Aromatherapy: Relaxation, stress relief, and mood enhancement

Pharmaceutical and Medical Use:

1. Antimicrobial and antiviral properties
2. Anti-inflammatory and antioxidant effects
3. Wound healing and tissue repair

General Methods for Preparation

Materials& Method (O/W, W/O)

↓

Add the required quantity of ingredient in sufficient amount of Base water and prepare a solution by heating on water bath

↓

In the above solution, add required quantity of Herbal extract

↓

Add 1 Solution drop wise into 2 Solution. When both the phases get mixed properly, add methyl paraben as preservative.

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↓

The formulated Polyherbal Cream was kept aside for about an hour in cool and dry place indirect to sunlight till it sets Completely and was used after 48 hours after keeping at Room temperature for stability and analytical testing

↓

Packed in container and store in cool place [21,25]

Evaluation Parameters for Moisturizing Cream:

1. Physical Evaluation: This mostly serves to evaluate the cream's colour, odour, texture, and stability

2. Viscosity: Basically, the purpose of this test is to determine how the ingredients in cream will behave in real life. Its primary purpose is to evaluate efficacy.

3. Washability: The quality of cream is also tested using this method. In this first of all we have to add small amount of cream which was applied on the hand. We must then wash with tap water after that

4. **Irritancy**: The cream was applied on left hand dorsal side surface of 1 sq.cm and observed in equal intervals up to 24hrs for irritancy, redness and edema. The did not produce any irritation or redness on skin.

5**. Spreadability**: The spread ability test showed that the formulated cream has good spreadable property.

Spreadability= m × l/

Where, m= Standard weight which is tied to or placed over the upper slide (30g)

l= length of a glass slide (5 cm)

t= time taken in seconds.

Greasiness

Here the cream was applied on the skin surface in the form of smear and checked if the smear was oily or grease-like.[20]

6.**Greasiness:** This test is mostly used to determine whether cream is greasy or oily in nature. We can conclude from the results that none of the formulations were greasy.

7. **pH Test:** Basically, this is talking about how acidic different compounds are. The pH (cream)) range is often between 4 and 7. Either a digital pH metre or pH paper was used to measure the results of this test

8. **Phase Separation**: Generally, this test is checked every 24 to 30 hours. For this, cream must be heated to between 30 and 80 °C in a covered container. Keep this mixture out of the light. [16,19]

II. CONCLUSION

A market trends indicates that consumer use of herbal products has significant increased over the past years. The factors like UV radiations, use of harsh chemical products have direct and indirect impact on the skin. The present work focuses on the potential of herbal extracts from cosmetic purposes. Hence, we conclude that the formulation of moisturizing cream is effective in reducing skin dryness without irritation, less adverse effect and better hydrating effect. Present investigations were carried out to formulate the herbal moisturizing cream preparations based upon traditional knowledge and to develop few parameters for quality and purity of herbal moisturizing cream. Nowadays there is strong demand for natural therapies. and this is increasing in western countrie Hence we conclude that the polyherbal formulation of moisturizing cream is effective in reducing dryness without irritation, less adverse effect and better hydrating effect. The awareness and need for cosmetics with herbs in on the rise, as it is strongly believed that these products are safe and free from side effects. For the treatment of dryness, we have both synthetic and natural herbal moisturizing cream

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