Review on Herbal Cream face

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Abstract

Herbal products are largely prepared in the recent time. Herbal creams offer several advantages over synthetic creams. The majority of existing creams which has prepared from drugs of synthetic origin and give extras fairness to face, but it has several side effects such as itching or several allergic reactions. Herbal creams do not have any of these side effects, without any side effect it gives fairness look to the skin. Herbal cream are the semi solid dosage form which are used for moisturizing, nourishing, whitening and treating various skin diseases. They are applied directly on the skin with the help of some adsorbent material and uses as medicinally as well as cosmetics. They are in two types oil in water and water in oil. General methods carried out to prepare herbal cream was very simple. The herbal cream was prepared using slab technique. The herbal extract used in this preparations are Aloe vera (Aloe barbadensis), Tulsi (Ocimum sanctum), Turmeric (Curcuma longa), Papaya (Carica papaya) etc. The physical parameters such pH, Homogenity, appearance, rubout, type of smear were determined. The herbal cream formulation showed good consistency, good spreadibility, pH, non-greasy and no evidence of phase separation. The herbal extracts containing cream substantially increased skin elasticity, hydration and decreased the skin melanin. Herbal face creams are considered as sustaining and productive way to advance the appearance of the skin. The study suggests that the composition of extract and the base of the cream are more stable and safe.

Keywords: Herbal cosmetics, Herbal cream, Herbal plants, Aloe Vera, Turmeric, Papaya, Tulsi.

INTRODUCTION

Cosmetics are the products which are generally used to beautify the skin and also to purity the skin. The cosmetics are the word derived from Greek word- ‘Kosmeticos’ which means to adorn. The today’s era, the use of herbal medicines become popular worldwide. A herbal cosmetic have growing demand in the world market.“Creams are defined as semisolid dosage from containing one or more drug substance dissolve or dispersed in a suitable base”. A cream is a Topical preparation usually used for application to the skin, these are either o/w or w/o type of emulsion. It act as a skin tone in day-to-day life by giving even skin tone. It also possesses vitamin E which provide required nourishing to the skin. The creams which are prepared from the herbal plants, the plants (herb) which are effective to the skin. These herbs should have varieties of properties like anti-oxidant, anti-inflammatory, anti-septic, anti-bacteria, emollient, etc.Creams consist of medicament dissolved or suspended in water removable or emollient bases, classified as water-in-oil or oil-in-water and intended for application on skin or accessible mucous membrane to provide localized and sometimes systemic effects at site of application. Unmedicated and medicated creams are mostly used in the treatment of various skin condition and dermatoses cream contains one or more drug substances dispersed or dissolved in a suitable base.[4,5,6]

Structure of Skin:-

The Skin, also as the cutaneous membrane, covers the outer surface of body and is the biggest organ of body in weight. In groups-ups, the skin covers part of around 2 sq.m. and weights , 4.5-5 kg 7% of whole body weight. It goes in thickness from 0.5 mm on eyelids to 4.0mm on the heels. Over a large portion of the body it is 1-2 mm thick. pH of the skin fluctuates from to 4 to 5.6 and refers to the pH of film of water and other dissolvable materials present on the outside of the skin. Sweat and Fatty acid emitted from sebum impact pH of the skin surface. It is recommended that Causticity of the skin helps in constraining or forestalling the development of pathogens and other organisms. The skinconsist of three functional layers- epidermis, dermis and Hypodermis.[4 5 6]

Epidermis:-

It is the peripheral layer. In many pieces of the body epidermis is about 0.1mm thick however on the bottom of feet and palms of the hands it very well may be 1mm fat or more. The chief skin cell that makes up epidermis is known as keratinocyte, accordingly named on the grounds that it delivers an intense protein called keratin. Keratin is additionally the protein from which nails and hair are produced. It gives skin a lot of its protection from physical put on and tears and makes skin water-resistant.[7 8 9]

The epidermis is separated into five layers: -

1. Stratum Corneum

The cells in stratum corneum layer are called as corneocytes. The cells have laveled out and are made basically out of keratin protein which gives power to the layer yet additionally Permits the assimilation of water. The structure of stratum corneum layer looks easy; however this layer is liable for keeping up the honesty and hydration of the skin a significant capacity.[10]

2. Stratum lucidum

The stratum lucidum layer is just present in tough skin where it helps decrease rubbing and Shear powers between the stratum corneum and stratum granulosum.[11]

3. Stratum granulosum

The cells in stratum granulosum, or granular layer, have vanished their cores and are portrayed by dim bunches of cytoplasmic substances. There is a great contract of action right Now keratin proteins and waterproofing lipids are being created and ordered.[12]

4. Stratum spinosum

Cells that shift into spinosum layer after from being columnar to polygonal, Right now cells begin to produce keratin.[13]

5. Stratum basale

The stratum is the base layer of keratinocytes in epidermis and is answerable for constantly recharging epidermal cells. This layer contains only one line of undifferentiated columnar branch cells that separated habitually. Half of the cells divide and move to the following layer to start the development method. The other half remain in basal layer and partition again and again to reload the basal layer.[14]

Dermis:-

Dermis lies instantly underneath epidermis and is around 4 times thicker. It contains various specific supporting tissues just as sweat glands, hair roots, nerves and blood vessels. The primary constituents of the dermis are protenious connective tissue fibres which are associated with the glycosaminoglycans or mucopolysaccharides.

The dermis is basically divided into two zones:

A shallow region nearby the epidermis, known as papillary region, and a profound thicker region known as the reticular region.

1. Papillary region

The papillary region is the made out of free aerolar connective tissue. It is named for its fingerlike projections known as papillae that expend near epidermis. The papillae give dermis a bumpy surface that intertwines with epidermis, strengthening the relationship between two layers of the skin.

2. Reticular regions

The reticular region lies somewhere down in papillary region and is generally a lot thicker. It is made out of thick unequal connective tissue, and get its name from thick grouping of collagenous, flexible, and reticular fibres that intertwine all through it.[22 23]

Hypodermis:-

Underneath the dermis lies a layer of fat, the subcutaneous fat. The profundity of this layer varies starting with one individual then onto the next. It contains bigger veins and nerves and is comprised of bunches of fat-filled cells known as adipose cells. The connection calm free, so the skin may move genuinely free.

LITERATURE REVIEW

1. Formulation and evaluation of herbal facecream:

B.Badwaik, UpdesinB.Lade, TikeshAgarwal,PrachiBarsagade, MadhuriNandgave, NilamGaddamwar. They made a study by evaluating formulated cream by the parameters such as PH,Spread ability, wash ability, non irritancy test,viscosity and phase separation of cream.[15]

2. Formulation and invitro evaluation ofherbal skin whitening cream of glycyrrhizinextract and solanumtuberosum.

Smitashete, mukeshmohite, revankarodi. Hasmade a review article and reported that frominvitro studies it is concluded that solanumtuberosum juice and olive oil both are used toincrease the penetration and absorption of creamfor 6 hours.V. Loganayaki , Int. J. of Pharm. Sci., 2024, Vol 2, Issue 5, 1809-1815 |Research.[16]

3. Formulation of herbal cosmetics

Ramakrishna S, Gopikrishna UV Has made aninnovative research and concluded in their studiesthat the stability tests revealed the inert nature ofpack.[17]

4. Herbal carrot face cream

HimajaN,Ashokkumar A, Bhartkumar BDarwin Research and Aayur and Aayurharma,Andhrapradesh, India 521212 The mainobjective of the work is to formulate for herbalcarrot face cream for cosmetics purpose.[18]

5. Herbal antibacterial face cream

Mr K.G Bhutkur and Mrs M .Shah.GenbasopanraoMoze College of pharmacy WagholiPune. The objective of this work is to formulate acosmetic preparation of herbal face cream madeherbal ingredients.[19]

6. Formulation of herbal face cream

Sachin BhagwatAglawe, AmolUttamraoGayke,Suraj Anil Mindle, VarshaGajanan,

Mahharashtra, India. The objective this work is toformulate an herbal face cream for cosmeticpurpose from herbal ingredient like carrot,saffron, coconut oil, aloe vera, rose oil.[20]

7. Formulation of herbal face cream

Yadav N and Yadav R Department of pharmacy,Bareily. U. P The objective is dried carrot ofcombined from had flow passable and suitable forface cream.[21]

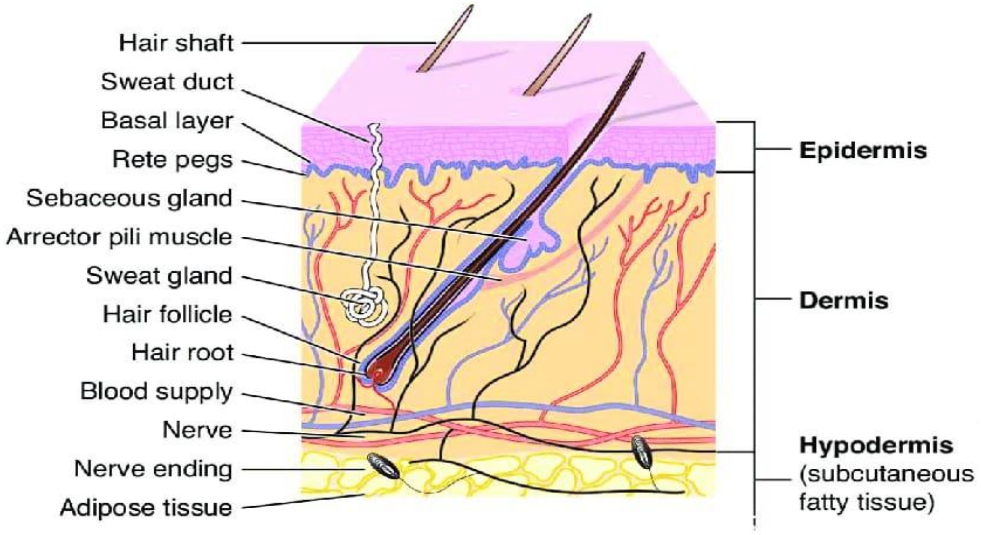

Fig -1: Cross section of skin

Functions of Skin

1. Absorption: Few medications that are absorbed by skin might be administered by applying Ointments, adhesive patches etc. to the skin.

2. Protection: Against pathogens, Langerhans cells in skin are components of the immune system.

3. Storage: Stores blood, water and lipid.

4. Water resistance: It keeps supplements from being washed from skin.

5. Control water loss: The skin keeps water from getting away by vanishing.

6. Sensation: Nerve endings identify vibration, touch, pressure, temperature and injury.

7. Thermoregulation: By delivering sweat and dilating veins, skin helps keep body cool, "Goosebumps" and vein constriction, assist us with holding heat.

8. Synthesis: Synthesis of vitamin D.

9. Elimination: Of substances and natural substances like drugs, toxins through sweating, Sebaceous secretion, cellular desquamation and transpiration.[24 25 26]

The Requirements for the basic skins-

Cleansing agent- which the dust particles, dead cells and dirt from skin that chokes the pores on the skin. Some of the common cleansers include vegetable oils like Coconut, sesame and palm oil.[27]

Tonners: The tonners help to tightens and toning the skin and keep it from being exposed to many of the toxins that are floating in the air or other environmental pollutants. Witch Hazel, germanium, sage, lemon, ivy burdock and essential oils are some of the herbs used as Tonners.[28]

Moisturizing: The moisturizing helps the skin to become soft and supple.[29]

Common skin conditions on the face:

•Acne

•Broken Blood vessels

•Hyperpigmentation

•Milia

•Melasma

•Sebaceous Hyperplasia

•SeborrheicDermati

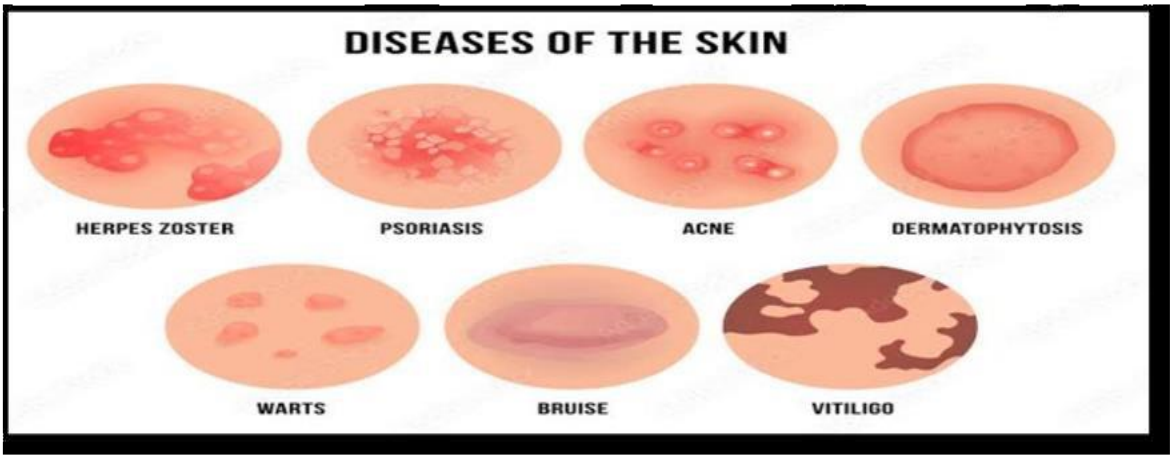

Fig -2: Disease of the skin

Ideal Properties of herbal face cream

•Good penetrating property so that the drug present in cream penetrates into skin and shows the desired property.

•It should be non-toxic so that it does not have any adverse effects on skin such as itching, rashes or redness.

•They should be optimum particle size.

•They should produce emollient effect.

•Thicker than a lotion, maintaining its shape, for example, a 50/50 emulsion of oil and water.[30 31 32]

Type of cream:

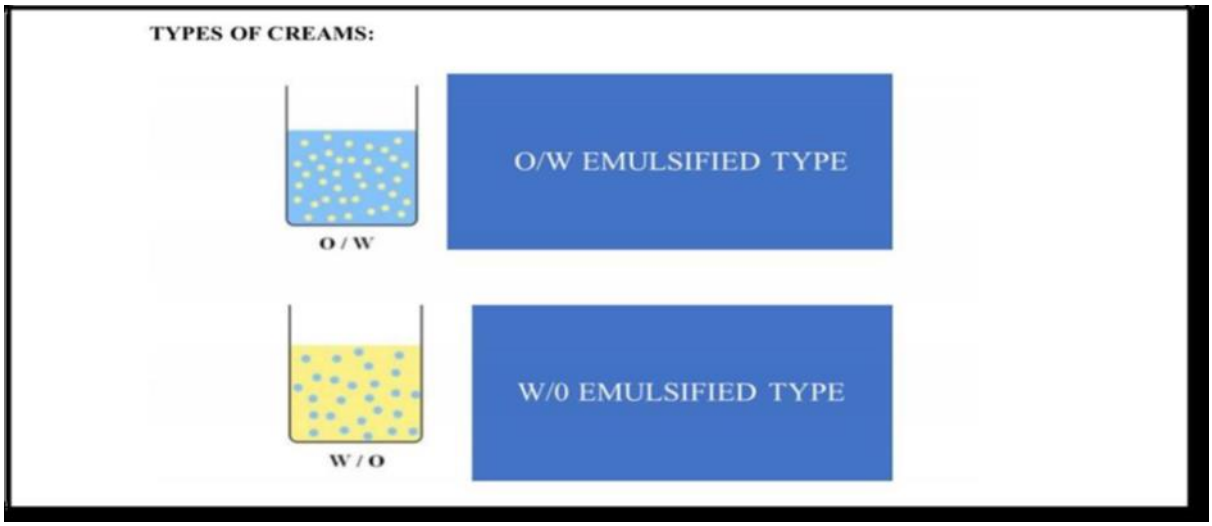

Fig -3: Types of Cream

Oil in Water (o/w):

Composed of small droplets of oil dispersed in a continuous phase. They are more comfortable and cosmetically acceptable as they are less greasy and more easily washed off using water.[33]

e.g: Vanishing cream, Foundation cream, Shaving cream, Hand cream.

Water in oil (w/o):

Composed of small droplets of water dispersed in continuous oily phase. They are more difficult to handle but many drugs which are incorporated into creams are hydrophobic and will be released more readily from a w/o cream than o/w cream they are also more moisturizing as they provided an oily barrier which reduces water loss from the stratum corneum, the outermost layer of the skin.[34]

e.g: Cold cream, Emollient cream.

Types of Method for preparation:

1.Slab method: The components are mixed until a uniform preparation is attained. One small scale, as in extemporaneous compounding, other will use an ointment mill. If components of an ointment react with metal hard rubber spatula may be used. Put this cream on the slab and add few drops of distilled water if necessary and mix the cream in a geometric manner on the slab to give a smooth texture to the cream and to mix all the ingredients properly. This method is called as slab technique or extemporaneous method of preparation of cream.

2.Trituration method: Use for finely divided insoluble powder particles or liquid. Insoluble powder is added by geometric dilution. Liquid is added by making well in center and avoid air pocket formation. Reduce the solid medicament to fine powder medicaments is mixed with small amount of base on ointment slab with a stainless steel spatula until a homogenous products in formed.

3.Fusion method: Fusion is the act or procedure liquefying or melting by the application of heat. By fusion method, all or some of the components of an ointment are combined melted together and cooled with constant stirring until congealed. Ointment base are melted decrease order of their melting point. Highest melting point should be melted first low melting point next. This avoid over heating of substance of lowmelting point incorporate medicament slowly to the melted mass stir thoroughly until mass cools down and homogenous products is formed.[35]

Ingredients for herbal face cream:

Aloe Vera:

Fig -4: Aloe-Vera (Aloe Barbadensis)

Phytoconstituent: Minerals, enzyme, hormones, lignin, salicylic acid, glucose, Vitamin A, choline, fructose, etc.

Genus: Aloe

Family: Asphodelaceae

Kingdom: Plantae

Roles:

1. Prevent premature aging.

2. Bring a natural glow to the skin.

3. Hydrate the skin with essential.[37]

➢ **Turmeric:**

Fig -5: Turmeric (Curcuma Longa)

Phytoconstituent: Curcuminoids, essential oil, Dihydrocurcumin

Genus: Curcuma longa

Family: Zingiberaceae

Roles:

1**.** Has anti-bacterial effect.

2. Has anti-fungal effect.

3. Has anti-inflammatory effect.

4. Reduce dark circles.[37]

➢ **Sandalwood:**

Fig:6 Sandalwood (Santalum album)

Phytoconstituent: Sequiterpene alcohols, alpha-santalol, santene, santenone.

Genus: Santalum

Family: Santalaceae

Kingdom: Plantae

Roles:

1. Reduces the appearance of scars and blemishes.

2. It has cooling effect.

3. Act as anti-aging properties.[37]

➢ **Papaya:**

Fig:7 Papaya (Carica Papaya)

Phytoconstituent: Papain, Chymopapain, Polypeptide, Amides**.**

Genus: Carica

Family: Caricaeae

Kingdom: Plantae

Roles:

1. Hydrates the skin.

2. Tightens the skin.

3. Brightens the skin.

Tulsi:

Fig:8 Tulsi (Ocimumtenuiflorum)

Phytoconstituent: eugenol, carvacrol, eugenol-methyl-ether

Genus: Ocimum

Family: Lamiaceae

Kingdom: Plantae

Roles:

1. Supports healthy skin aging

2. Soothes skin condition like eczema

3. Great for healing skin problem[37]

Neem:

Fig:9 Neem (Azadirachtaindica)

Phytoconstituent: Nimbin, Nimbolide, ascorbic acid, gedunin, Azadirachta

Genus: Azadirachta

Family: Meliaceae

Kingdom: Plantae

Roles:

1. It has anti-inflammatory, antifungal, antimalarial properties.

2. It heals the scar and fights acne.

3. Clear and glowing skin.[37]

Honey:

Fig:10 Honey (Apismellifera)

Phytoconstituents: Maltose, Dextrin, Acetic acid, Glucose, Sucrose

Family: Apidae

Kingdom: Animalia
Genus: Apis
Uses:
1. Helps to clear out acne.
2. Hydrates the skin without making it oily.
3. Smooth calluses.
4. Feel and smell good. 5. Help yourself relax.
6. Soften the roughest parts of your body.[38]

- **Carrot:**

Fig:11 Carrot (DucausCarota)

Phytoconstituents: DucausCarota.

Family: Apiaceae.

Kingdom: Plantae

Genus: Daucus

Uses:

Carrot is also used to prevent cancer, Digestive

health, obesity, and other nutrient deficiencies.[37]

General method for preparation of Herbal Cream:

Materials & Methods (o/w, w/o)

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

In the above solution, add required quantity of herbal extract

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

The Formulated polyherbal cream was kept aside for about an hour in cool and dry place indirectly 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[39 40 41]

Disadvantage of Herbal Cream

1. Sometimes causes irritancy to skin.

2. Itching or several allergic reaction.[42]

Evaluation Test

Physical evaluation: The prepared herbal cream was observed for colour, odour, texture, state in physical evaluation.[43]

Irritancy test: An area of 1sq.cm is marked on the left-hand dorsal surface. Then cream is applied to the specified area and time is noted. Irritancy, erythema, edema was checked, if any, for regular intervals up to 24hrs and reported**.[44]**

Spreadability: Adequate amount of cream is taken between two glass slides and a weight of 100gm is applied on the slides for 5 minutes. It can be expressed as,

S=m*l/t

Where,

m = weight applied to upper slide.

l = length moved on the glass slide.

t = time taken.[45]

Viscosity: Viscosity of formulated herbal creams can be determined by using Brookfield Viscometer.[45]

Homogenity: The formulation was treated for homogeneity by visual appearance and by touch.

Removal: The ease of removal of the herbal creams applied was examined by washing the applied part with tap water.

Dye test: The scarlet dye is mixed with the cream. Place a drop of cream in a slide and cover with a cover slip and examine it under a microscope. If the disperse globule appears red and the ground colourless then it is o/w type and the reverse condition appears in w/o type of creams.

Type of smear: After application of cream, the type of film or smear formed on the skin was checked.

Determination of pH: The pH of the formulated herbal cream can be measured on a standard digital pH meter at room temperature by taking adequate amounts of the formulation diluted with a suitable solvent in a suitable beakers.

RESULT:

Report of stability studies:

The colours were changed especially on thetemperature of 40°C where as in other temperatureit is stable.

- Face glowing
- Whitening
- Remove blackades
- Prevent from dry skin
- Avoids the ageing skin

CONCLUSION:

The herbal preparation is beneficial for easy application and no side effects and are mostly preferred by peoples. The uses of creams have been increased in many folds in cosmetic as well as medicinal values. The uses of bioactive ingredients in topical formulation influence biological functions of skin and provide nutrients necessary for healthy skin. Due to anti-bacterial and anti-inflammatory properties of herbs like aloevera, sandalwood, turmeric, etc, it prevents skin related disorders also improved skin tone, protects from damaging UV rays. The study revealed that herbal cream is very safe and does not produce any toxic and adverse reactions compared to marketed semisolid products.

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