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REVIEW ON FORMUATION AND EVALUATION OF HERBAL SUNSCREEN

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Abstract

Herbal cosmetics have gained significant popularity among consumers compared to synthetic alternative. Herbal sunscreens are offered in various topical formulation. This study aims to gather contemporary information on the development of herbal sunscreens review the guidelines for their formulation and examine the use herbal extracts and natural compound in this products. Sunscreens serve to shield the skin from harmful ultraviolet (UV) radiation , thereby minimizing the risk of sunburn and other skin- related issues prolonged exposure to ultraviolet radiation (UVR) can lead to various skin disorders including sunburn, erythema , premature aging ,wrinkle formation , pigmentation issues , DNA damage. Sunscreen are chemical agents UV rays with sunburn primarily resulting from ultraviolet B radiation although ultraviolet a radiation can also be particularly harmful. Sunscreen should provide protection against both type UV radiation. The herbal sunscreens it is essential that these natural agent chemically safe , non-irritating , non-toxic, photostable, and capable protection against solar radiation damage.

Keywords :- herbal sunscreens skin burn sun protection ultraviolet reys butterfly flower tulsi

Introduction

There is a growing interest among consumers in herbal cosmetics as opposed to synthetic cosmetic products. Sunscreen creams, which contain sun protection factor (SPF), are used to shield the skin sunburn. A higher SPF value signifies greater protection against the intense UV radiation emitted by sunlight . review indicates that herbal sunscreen are generally safer and result in fewer side effects compared to those made with chemical ingredients .Sunscreen can be categorized into two type

!) physicai sunscreens :these reflect sunlight

2) chemical sunscreens: these absorb UV light

The skin is the body's largest organ enveloping its entire outer surface. It consists of three distinct layer: the epidermis , dermis ,and hypodermis, each with unique anatomical features and functions (refer ti the image illustrating the cross section and layer of the skin) this complex structure form a vital barrier that protects the body from pathogen , ultraviolet (UV) radiation , harmful chemical, and physical injuries

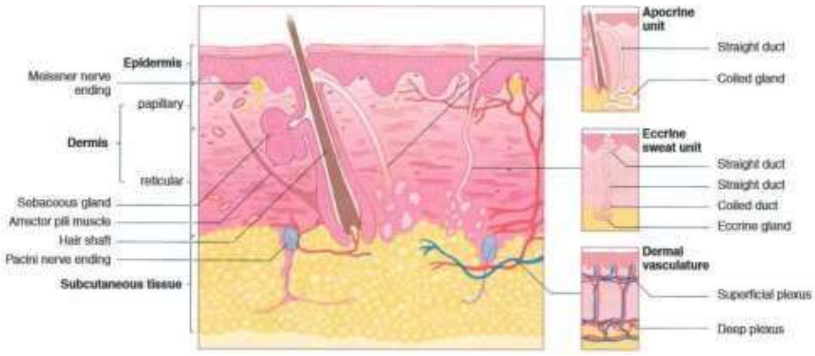

Fig.1 Skin

Benefits of sunscreen

1. Decreases the developing of skin cancer
2. Protect against sunburn
3. Avoid inflammation and redness
4. Reduce the occurrence of blotchy skin and hyperpigmentation
5. Prevent DNA damage
6. Maintains the appearance and texture of your skin

Ideal properties of sunscreen

1. Should effectively absorb a wide spectrum of UV rays that lead to sunburn.
2. Most maintain stability when exposed to sunlight.
3. Should offer comprehensive protection for the skin.
4. Should resist being easily removed by water.
5. Must be safe effective and chemically inert at low concentration
6. Should not induce irritation sensitization or toxicity

Uses

1. Sunburn prevention ; shield the skin from UVB rays thereby minimizing the likelihood of sunburn, redness, and discomfort
2. Shik cancer risk reduction: aids in the prevention skin cancer including melanoma, basel cell carcinoma and squamous cell carcinoma
3. Preventionof premature aging: protect the skin from UVA rays helping the appearance of wrinkle , fine line, and age spots

Advantage

1. No specialized equipment is required for preparation
2. They are cost –effective
3. Ingredients are readily accessible
4. Non- toxic and non- irritating
5. Thry are netural

Disadvantage

1. It is challenging to mask the teste and odour
2. The manufacturing process can be consuming and complex
3. Herbal remedies tend to have slower effects compared to allopathic medications

Drug profile

Betterfly pea flower

Betterfly pea flower is packed with antioxidant like flavonoid anthocyanins and polyphenol these nutrients are great for your skin they help boost overall skin health improve elasticity reduce fine line and give you healthier ,more eadiant appearance

1. Botanical name ;clitoria ternatea

1.Botanical name: clitoria ternatea
2.Kingdom: plantea
3.Order : fabales
5.Biological source : the flower leaves and seed of ternatea
6.Benefits :anti-inflammatory, antioxidant, antimicrobial

Fig.2 Betterfly Pea flower.

Aleovera

Aleovera is a great addition to my sunscreen . its known for helping to both prevent and treat sunburn the gel smooth the skin reduce inflammation

1. Botanical name; aleo barbadensis
2. Kingdom ; plantae
3. Order ; Asparagales
4. Family ; Asphodelaceae
5. Biological source ; Aleo vera derived from the leaf of he aleo vera Plant
6. Benefits; smoothes sunburn and irritation hydrate and moisturizes skin,

Fig.3 Aleovera

Basil leave

Basil is a leafy herb that grows yearly and is part of the mint family . commonly use its leavesin cooking ,for health remedies ,and even in spiritual traditions

1. Botanical name: ocimum sanctum
2. Kingdom : plantae
3. Order : lamiales
4. Family :lamiaceae
5. Biological source :basil leave are derived from the plant ocimum sanctum
6. Benefits :Natural UV protection ,antioxidant Power,anti-inflammatory

Fig.4 Basil Leave

Green tea

Green tea contains polyphenol which are powerful antioxidants . these compounds help protect the skin from UV damage and signs of aging by absorbing harmful UV rays green tea also has smoothing properties making it great for calming sensitive or irritated skin

Fig.5 Green Tea

1. Botanical name:camellia sinensis
2. Kingdom: plantae
3. Order: Ericales
4. Family: Theaceae
5. Biological source: green tea is derived from the leave and bud
6. Benefits: antioxidant rech protect against cell damage and antioxidative stress, reduce the inflammation

Rose water

Rose water cantains vit-B ,which is the often used in sunscreen and other sun care product . it help improve the effectiveness of SPF. Rose watercan also help lighten dark spots and even out skin tone it remove excess iol and dirt .its balance your skins PH level and as a hydrating and nourishing agent

1 Botanical Name: Rosa damascene
2 Kingdom : plantae
3 Order: Rosales
4. family :Rosaceae
5. Biological source : rose water derived from the petal of rose plant
6. Benefits : smoothes acne redness and irritation ,Hydrates and moisturizes skin

Fig.6 Rose water

Coconut oil

coconut oil maintains skin softness smoothness while helping to prevent premature aging . aiding in the removal of dead skin cells and alleviating dryness coconut oil possesses antibacterial antifungal antiviral properties that protect the skin from damage.

1. Botenical name: cocos nucifera
2. Order: Aracales
3. family : arecaceae
4. Biological source: coconut oil is extracted from the meat of mature coconut
5. Benefits : moisturizes skin and hair, Antiinflammtory and antioxidant

Fig.7 Coconut oil

Vitamin E capsule

Vitamin E offers enhanced protection against acute UVB damage and guards against cellular matations resulting from exposure to sunlight and pollution . it aids in cleansing the skin by removing impurities and contributes to improved skin elasticity. Vitamin E both antioxidant and anti-inflammatory properties it positive effects skin health and appearance.

Fig.8 Vitamin E capsule

1	Benefits ;1. boosts UV protection	
	2.Reduces UV induced skin damage	
	3.Moisturizes and nourishes	
	4. Sopports skin healing	
	5.Prevents premature aging	

Conclusion

The review aimed to formulate a herbal sunscreen cream utilizing extracts from the butterfly pea flower and evaluated its effectiveness in preventing sunburn

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