

Formulation And Evaluation of Multipurpose Turmeric Cream

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Abstract

To Formulate and Evaluate Turmeric cream utilizing , extricates of Neem (Azadirachtaindica) and Tulsi (Ocimum Sanctum Linn) and Turmeric (Curcuma longa) to grant multipurpose effect. The cream was arranged by utilizing the cream base that is bee's wax, liquid paraffin, borax, methylparaben, refined water, rose oil, , extricates of NeemTulsi and Turmeric. The cream was arranged by utilizing the piece technique/extemporaneous strategy for geometric and homogenous blending of all the excipients

Keywords: Aloe barbadensis (gel), Azadirachtaindica (Neem), Ocimumtenuiflorum/Ocimum sanctum (Tulsi), Herbal cosmetic, Multipurpose cream, Formulation.

Introduction :

Medicinal or pharmaceutical chemistry is a branch of chemistry and pharmacology concerned with the design, synthesis, and development of pharmaceutical medications.(1,2)

Pharmaceutical chemistry focuses on the effectiveness of medications and the suitability of medical equipment for the uses for which it is intended.(3)

Plant-derived substances and natural medicines have currently attracted super interest towards their flexible application, as medicinal plants are the richest supply of bioactive compounds utilized in traditional and modern medicinal drug.

Herbal plant items are utilized as the establishment of various logical medicines in human creatures. Herbal items are not as it were the most viable, but they are fantastically non-poisonous and have helpful dosages legitimately underneath their harmful levels.(4) In the later a long time, there has been a continuous restoration of intrigued in the utilize of therapeutic plants in creating nations since herbal solutions have been detailed secure without any antagonistic side impact particularly when compared with engineered drugs. Hence a look for modern drugs with way better and cheaper substitutes from the plant root is a characteristic choice¹. Herbal products cures for skin care with antibacterial and antifungal exercises are arranged from a assortment of plant parts such as takes off, stem, root, bark or fruit.(4)

Herbal Cream:

An cream including Neem (Azadirachtaindica), Turmeric (Curcuma longa), and Tulsi (Ocimum Sanctum Linn) extract is being developed and evaluated in the current work.(6) Herbal cream have gained considerable attention in recent years due to their potential therapeutic properties and minimal side effects compared to synthetic counter parts. This project aims to provide an Multi purpose turmeric effect of the formulation and evaluation of herbal cream containing neem (Azadirachtaindica),Turmeric (Curcuma longa), and tulsi (Ocimum Sanctum Linn).(7)

These three herbs have long been recognized for their medicinal properties and have been Extensively used in traditional medicine.(7)

• ADVANTAGES :

- Build collagen and helpsin anti-aging.
- Decrease hyperpigmentation.
- Increase your natural glow.
- It's a potent anti-inflammatory and antioxidant.

- DISADVANTAGES :
- Skin irritation or Dermatitis may occur due to the drug or excipient.
- May occur Burning, itching, stinging, or soreness.
- Flushed skin and inflammation.
- Not able to cure rapid sickness and accidents.
- Risk with self-dosing.

IMPORTANCE OF COMPONENTS

Neem(*azadirachtaindica*) :

It is the most common tree found in India and other countries of the world. The Sanskrit name 'Nimba' comes from the term "NimbatiSwasthyamdadi" which means to give good health. *Azadirachtaindica* contains many natural substances in its different parts: leaves, seeds, bark has many biological activities against disease-causing organisms and it contains about 140 chemical compounds. The leaves and seeds of the neem tree contain active material known as azadirachtin. It has the ability to kill the disease-causing fungi, viruses, and parasites.

Botanical name: *Azadirachtaindica*

Part typically used: Leaves

Colour: Green

Description: Compound alternate, rachis 15-25 cm long, 0.1 cm thick, leaflet with oblique, serrate, 7-8.5 cm long and 1-1.7 cm wide slightly yellowish green in color.

Turmeric (*Curcuma longa*) :



It is an important natural source of yellow pigment, spice, nutraceuticals, and herbal medicine. Turmeric is the common name used for the '*Curcuma longa*' plant and it belongs to the family Zingiberaceae.

Biological name: *Curcuma longa* and *Curcuma aromatic*

Common name: Haldi

Chemical constituents: Curcumin

Part Typically used: Rhizome

Colour: Bright Yellow

Uses: Anti-septic, Anti-inflammatory



Tulsi(*Ocimum tenuiflorum*) :

Tulsi, also known as holy basil, is a sacred plant in Hinduism. It is considered to be a manifestation of the goddess Tulsi and is highly revered in Indian culture. The leaves of the Tulsi plant are used in various religious rituals, Ayurvedic medicine, and culinary preparations.

Biological name: *Ocimum tenuiflorum*

Common name: Holy basil

Chemical Constituent: Linalol, Eugenol, Methylchavicol, Methylcinnam

Part Typically used: Leaves

Colour :Green.

Uses: Ani-microbial, Ani-fungal, Stress relief, Antioxidant



Material and method:

Collection of ingredients:

Leaves of *Azadirachta Indica* and *Ocimum tenuiflorum* were collected from the tree in the college campus, rhizomes of *curcuma longa* were collected from different matured plant. Leaves were wash by using distilled water and dry by using sun drying method.

Preparation of powder :

1. Took a leaves of Neem And Tulsiplant.
2. Dried them with the help of Sunlight.
3. After complete drying them then.
4. Grind them with the help of grinder/mixer.
5. After grind them used the neem and tulsipowder for Preparation.

Extraction process:

The *Azadirachta indica*, *Ocimum tenuiflorum* And *curcuma longa* powder was extracted with methanol by maceration process. 10 gm of above stated powder was taken in conical flask and extracted with for 3 days with occasional agitation. Then Filtered.

Procedure of cream :

Oily phase: Heat Bees wax, liquid paraffin in beaker at a temperature 75°C in water bath

Aqueous phase: Dissolve borax in a beaker add methyl paraben and distilled water.

Transfer the aqueous phase into oily phase with continuous stirring and then add Neem extract, *curcuma longa* and Tulsi extract in that beaker with continuous stirring and finally add rose oil.

Excipient and herbal ingredient used with their roles:

Table No 1 : Excipients And Ingredient

Sr.No	Ingredients	Role
1	Turmaric	Anti-septic, anti inflammatory
2	Tulsi	Anti bacterial
3	Neem	Promote wound healing
4	Bee-wax	Emulsifying agent
5	Liquid paraffin	Lubricating agent
6	Borax	Alkaline agent
7	Methyl paeaben	Preservative

8	Distilled water	Vehical
9	Rose water	Fragrance

Formulation :

Sr.No	Ingredients	Quantity
1.	Turmeric extract	1.5ml
2.	Tulsi extract	1.3ml
3.	Neem extract	1.2ml
4.	Beeswax	3.1gm
5.	Liquid paraffin	8.5ml
6.	Methylparaben	0.25gm
7.	Borax	0.35gm
8.	Distilled water	q.s
9.	Rose water	q.s

Evaluation of cream :**Physical evaluation :**

In this test, the cream was observed for color, odor, texture, state

Irritancy

Mark the area (1 cm²) on the left-hand dorsal surface. Then the cream was applied to that area and the time was noted. Then it is checked for irritancy, erythema, and edema if any for an interval up to 24 h and reported.

Wash ability

A small amount of cream was applied on the hand and it is then washed with tap water.

PH :

0.5 g cream was taken and dispersed in 50 ml distilled water and then PH was measured by using digital PH meter

Viscosity :

Viscosity of cream was done by using Brooke field viscometer at a temperature of 25 °C using spindle No. 63 at 2.5 RPM .

Phase separation :

Prepared cream was kept in a closed container at a temperature of 25-100 °C away from light. Then phase separation was checked for 24 h for 30 d. Any change in the phase separation was observed/checked.

Spread ability :

The spreadability was expressed in terms of time in seconds taken by two slides to slip off from the cream, placed in between the slides, under certain load. Lesser the time taken for separation of the two slides better the spreadability. Two sets of glass slides of standard dimension were taken. Then one slide of suitable dimension was taken and the cream formulation was placed on that slide. Then other slide was placed on the top of the formulation. Then a weight or certain load was placed on the upper slide so that the cream between the two slides was pressed uniformly to form a thin layer. Then the weight was removed and excess of formulation adhering to the slides was scrapped off. The upper slide was allowed to slip off freely by the force of weight tied to it. The time taken by the upper slide to slip off was noted.

Spread ability= $m \times l/t$

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.

Results & Discuss :

The formulations showed good appearance, PH, adequate viscosity and no phase separation was observed. Also, the formulations showed no redness, erythema and irritation during irritancy study and they were easily washable. The formulations were stable at room temperature.

From the result of test conducted being preparation so that yellow color is spread evenly in the cream that proves . the cream preparation made have a type of oil in water. Where this type of cream has the advantage is more easily spread on the surface of skin on not sticky and easily remove by washing. The purpose preparation of test is know the stability of the cream preparation made The

Formulation can be detected in several ways in the physical apperances, color, and texture of the preparation.

Conclusion:

By using turmeric, neem and tulsi the cream showed multipurpose effect and all herbal ingredients were used showed different significant activities. Based on the results we can say that the formulation were stable at room temperature and can be a safely used on the skin. The present work focuses on the potential of herbal extract from Medicated purpose.

The uses of cream have been increased in many folds in personal care system. The uses bioactive ingredient in influence biological functions of skin and provide nutrients necessary for the healthy skin.

The prepared formulation showed good spreadability, no evidence of phase separation and good consistency during the study period. The prepared herbal cream has best properties and having nutritional values using less chemical which protects the skin from the various skin problem. Since the cream was prepared by using simple ingredients and simple method so the cream is also economical.

The herbal cosmetic formulation is safe to use and it can be used as the provision of a barrier to protect skin. The result of different tests of cream showed that the formation could be used topically in order to protect skin against damage. Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. Further research will carry out to check scientifically the synergistic action of formulation.

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