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Review Article

## A Review: Formulation and Evaluation of a Poly Herbal Skin Care Lotion

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### Abstract:

The medicinal plants are widely used by the traditional medicinal practitioners for curing various diseases in their day to day practice. In traditional system of medicine, different parts (leaves, stem, flower, root, seeds and even whole plant) of *Ocimum sanctum* Linn. have been recommended for the treatment of bronchitis, malaria, diarrhea, dysentery, skin disease, arthritis, eye diseases, insect bites and so on. The *O. sanctum* L. has also been suggested to possess anti-fertility, anticancer, antidiabetic, antifungal, antimicrobial, cardioprotective, analgesic, antispasmodic and adaptogenic actions. Eugenol (1-hydroxy-2-methoxy-4-allylbenzene), the active constituents present in *O. Neem (Azadirachta indica)* is a member of the Meliaceae family and its role as health-promoting effect is attributed because it is rich source of antioxidant Carica papaya is a herbaceous succulent plant popularly known as pawpaw, and belongs to the Caricaceae family. Psoriasis is one of the most common skin diseases in humans and affects a major population worldwide. The aim of the present study is to evaluate the efficacy of selected polyherbal formulations against psoriasis-induced secondary infections

**Keywords:** *Osmium sanctum, Azadirachta indica & Carica papaya, Poly herbal skin lotion.*

### INTRODUCTION

The preparations known as herbal lotions are phytochemicals from a range of botanical sources that influence skin infections and supply nutrients essential for healthy skin. The Meliaceae family includes the tree species neem (*Azadirachta indica*). Medicine is made from the seeds, bark, and leaves. The fruit, bloom, and root are also utilized occasionally. Neem leaf is used to treat a variety of conditions, including leprosy, bloody noses, intestinal worms, stomach trouble, appetite loss, skin ulcers, cardiovascular illness, fever, diabetes, gingivitis, and liver issues Tulsi (*osmium*

*sanctum* Linn.) is the most important herb utilized in Ayurveda, and modern studies are now validating its health benefits.

One of the tropical and subtropical trees, Carica papaya (also known as papaw or papaya), is well recognised for having all of its components used. The fruit has been successfully used in meals a dietary supplement, an appetiser, and a snack, but the leaves have been successfully employed in herbal medicine as an antimicrobe, antioxidant, antiviral, treatment for haematology disorders, and an anticancer agent. As a nutritional

supplement, the fruit can be used as a detoxifier and as a metabolism inducer.

## MATERIALS AND METHODS:

### MATERIAL:

Neem, Tulsi, and papaya were procured from the neighbourhood market and local garden, respectively. Distilled water, gum tragacanth, lemon oil, rose oil, and glycerine were gathered.

### METHOD:

#### 1. *Extraction of Azadirachtaindica:*

For the extraction, 19 gm of crushed neem leaves were macerated with 150 ml of distilled water for three days. The solution was placed in the rotary evaporator for around 30 to 40 minutes after three days. The extracted material was held for additional drying in a water bath after the technique was finished for around 9 to 10 hours, or until we reached a sticky consistency.

#### 2. *Extraction of Osmium sanctum:*

Osmium Sanctum was extracted using 67 grammes of crushed Tulsi leaves macerated in 450 ml of ethanol, which was then placed in a rotary evaporator for roughly 15-20 minutes. The extracted material was held for additional drying in a water bath after the technique was finished for around 9 to 10 hours, or until we reached a sticky consistency.

#### 3. *Extraction of Carica Papaya:*

The papaya fruit was split into pieces and the seeds were taken out. The fragments were then pulverised using a mortar and pestle. After being finely ground, it was placed in a beaker with 100ml of ethanol was put into the beaker and kept it for 25-30 minutes for maceration process.

## FORMULATION OF HERBAL LOTION

*In a beaker, all of the above materials – quantity mentioned were taken and stirred properly to get a uniform mixture. After that, in a volumetric flask the solution was taken*

**Table1: Ingredients that went into making Poly Herbal Skin Care Lotion.**

<i>SI no.</i>	<i>Ingredients</i>	<i>Quantity</i>	<i>Use</i>
1	<i>Neem extract</i>	<i>3mg</i>	<i>Neem extract aids in the treatment of wounds, the prevention of skin infections, and anti-aging.</i>
2	<i>Tulsi extract</i>	<i>3mg</i>	<i>Blackheads, acne, and skin infection are prevented and treated.</i>
3	<i>Papaya pulp</i>	<i>10mg</i>	<i>Removes pollutants from skin and exfoliates dead skin cells.</i>
4	<i>Glycerine</i>	<i>2ml</i>	<i>Used as humectants.</i>
5	<i>Lemon oil</i>	<i>1.5ml</i>	<i>Used as anti-microbial.</i>
6	<i>Rose oil</i>	<i>Q&gt;S</i>	<i>Used for scent.</i>
7	<i>Gum tragacanth</i>	<i>4.5mg</i>	<i>Used as an emulsifier and stabilizer.</i>
8	<i>Distilled water</i>	<i>30ml</i>	<i>Used as the medium.</i>

**Table 2: Evaluation parameters of poly herbal Skin Care Lotion**

<b>Organoleptic parameters</b>	
<b>Test</b>	<b>Description</b>
<i>Appearance</i>	<i>By visual examination, the appearance of the lotion was observed.</i>
<i>Color</i>	<i>By visual examination the color of the cream was observed.</i>
<i>Odor</i>	<i>By smelling the odor of the lotion was tested.</i>
<b>Physicochemical parameters</b>	
<i>pH</i>	<i>By using both pH paper and digital pH meter, the pH of prepared herbal lotion was measured.</i>
<i>Spreadibility</i>	<i>The spreadability of a lotion was evaluated by sandwiching the sample between two slides, which was then uniformly squeezed for a predetermined amount of time with a specific weight.</i>
<i>After-fill</i>	<i>Emolliency slipperiness and the quantity of residue remaining after applying the predetermined amount of cream were discovered.</i>
<i>Types of Smears</i>	<i>After applying the lotion, the kind of film or smear that developed on the skin was examined.</i>
<i>Irritancy Test</i>	<i>A specific area of the left hand's dorsal surface received the lotion application. Anger, erythema, and oedema were monitored for up to 24 hrs and reported.</i>
<i>Ease of removal</i>	<i>By washing the area where the cream was administered with water, it was determined how easily the cream could be removed.</i>
<i>Test for microbial growth</i>	<i>The formulation was placed in the centre of the petri dish, and the plates were then incubated at 37°C to check for microbial growth.</i>

**RESULTS:**

- i. **APPEARANCE:** *The formulation had a lotion-like appearance.*
- ii. **COLOR:** *The formulation was seen to be greenish in color.*
- iii. **ODOR:** *The scent was strong.*
- iv. **PH:** Both a digital pH meter and a pH paper indicated that the formulation's pH was roughly 7.8.
- v. **SPREADABILITY:** *The formulation spread really well.*
- vi. **AFTER-FILL:** *The after fill was incredibly soft and the formulation had an emollient character.*
- vii. **TYPES OF SMEARS:** *The formulation proved effective at forming a film on different types of smears.*

- viii. **IRRITANCY TEST:** *The formulation was non-irritating and non-allergic on the skin according to the irritancy test.*
- ix. **EASE OF REMOVAL:** *The formulation was easily removed from the skin using water and it took 25 to 30 seconds to do so.*
- x. **TEST FOR MICROBIAL GROWTH:** *No microbial growth was found during the microbiological growth test.*

**DISCUSSION:**

*Poly herbal skin care lotion which contains Neem, Tulsi and Papaya extract was formulated. For evaluation organoleptic properties, Physicochemical parameters were also being analysed.*

*All the parameters shown results in acceptance range. This formulation can further be compared with marketed one for better efficacy.*

#### CONCLUSION:

*Evaluation tests for herbal lotions are studied and experiments carried out both during manufacture and, on occasion, afterward by regulatory organizations and researchers. In this study, a formulation of herbal lotion was tested and evaluated for both its physiological parameters (pH, spreadability, after-fill, types of smears, ease of removal, irritancy test, and test for microbial growth) and organoleptic features (appearance, color, odor). The findings show that the formulation complied with the norms, proving its chemical soundness.*

#### AUTHOR'S CONTRIBUTION:

*Anjali Salvi designed the work, wrote the manuscript, Pooja Soni and Md. Faruque Shaikh formulated and evaluated the product.*

*Ankur Sharma played a central role for guiding and successful completion of the research work.*

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