

## HERBAL FACE PACK PREPARED FROM CROSSANDRA LEAVES

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### ABSTRACT

In recent years, herbal cosmetic preparations have gained considerable attention owing to their natural origin, better compatibility with skin, and minimal adverse reactions compared to synthetic products. Herbal face packs are commonly utilized for improving skin texture, enhancing complexion, and protecting the skin from various disorders. Leaves of *Crossandra infundibuliformis* contain several bioactive constituents including flavonoids, tannins, alkaloids, glycosides, and phenolic compounds that exhibit antioxidant, antimicrobial, and anti-inflammatory properties. These pharmacological activities make *Crossandra* leaves a promising ingredient for herbal cosmetic formulations. The present review highlights the phytochemical composition, preparation method, benefits, evaluation parameters, and cosmetic applications of *Crossandra* leaf face packs.

**KEYWORDS:** *Crossandra* leaves, Herbal formulation, Natural cosmetics, Face pack, Antioxidant activity, Skin rejuvenation, Phytoconstituents.

### INTRODUCTION

Herbal cosmetics have become an important part of modern skin care due to increasing concerns regarding the harmful effects associated with synthetic cosmetic ingredients.<sup>[1]</sup> Natural formulations are generally considered safer, environmentally friendly, and more compatible with human skin because they contain plant-derived active constituents.<sup>[2]</sup>

Face packs are topical cosmetic preparations widely used to cleanse the skin, tighten pores, remove impurities, and improve overall facial appearance.<sup>[3]</sup> Regular application of herbal face packs may support skin nourishment, improve circulation, and assist in maintaining healthy skin texture.<sup>[4]</sup>

*Crossandra infundibuliformis* is a medicinal and ornamental plant cultivated extensively in tropical areas of India. Traditionally, different parts of the plant have been employed in folk medicine for their healing and antimicrobial effects.<sup>[5]</sup> The leaves are particularly rich in phytochemicals such as flavonoids, tannins, alkaloids, and phenolic compounds which contribute to antioxidant and anti-inflammatory activities beneficial for skin care applications.<sup>[6]</sup>

Due to these therapeutic properties, *Crossandra* leaves may serve as an effective ingredient in herbal face pack formulations intended for acne reduction, skin cleansing, and complexion enhancement.

### **Phytochemical Constituents of *Crossandra* Leaves**

*Crossandra* leaves contain several biologically active compounds responsible for cosmetic and therapeutic activities.<sup>[7]</sup>

Important phytoconstituents reported in the plant include:

- Flavonoids
- Tannins
- Alkaloids
- Glycosides
- Phenolic compounds
- Saponins

These natural constituents help protect the skin against microbial contamination and oxidative stress caused by free radicals.<sup>[8]</sup>

### **Advantages of Herbal Face Packs**

Herbal face packs offer numerous advantages when compared with synthetic cosmetic preparations:

1. Possess minimal toxic effects on skin<sup>[9]</sup>
2. Prepared from naturally available ingredients
3. Environmentally safe and biodegradable
4. Suitable for various skin types
5. Produce fewer adverse reactions<sup>[10]</sup>
6. Enhance natural skin glow and smoothness

### **Method of Preparation of *Crossandra* Leaf Face Pack**

#### **Materials Required**

- Dried *Crossandra* leaf powder
- Multani mitti
- Sandalwood powder
- Turmeric powder
- Rose water

#### **Preparation Procedure**

1. Fresh leaves of *Crossandra* are collected and washed thoroughly using purified water.
2. The cleaned leaves are shade dried for about one week to preserve active constituents.

3. Dried leaves are finely powdered with the help of a grinder and passed through a sieve to ensure uniform particle size.
4. The powdered ingredients are blended in suitable proportions.
5. The prepared mixture is transferred into an airtight container for storage.
6. Before application, the powder is mixed with rose water to obtain a smooth paste consistency.
7. The paste is applied uniformly over the face and allowed to dry for approximately 15–20 minutes before washing with cold water.

<b>Ingredient</b>	<b>Quantity</b>
Crossandra leaf powder	20 g
Multani mitti	15 g
Sandalwood powder	10 g
Turmeric powder	5 g

This herbal formulation may help cleanse the skin and improve facial appearance naturally.<sup>[11]</sup>

### **Evaluation Parameters of Face Pack**

#### **1. Organoleptic Characteristics**

The prepared formulation is visually and physically examined for:

- Color
- Odor
- Texture
- Appearance

These characteristics influence the acceptability of cosmetic formulations by consumers.<sup>[12]</sup>

#### **2. pH Determination**

The pH of the formulation should remain compatible with normal skin pH to avoid irritation. An ideal herbal face pack generally exhibits a pH range between 5.5 and 7.<sup>[13]</sup>

#### **3. Particle Size Analysis**

Uniform particle size distribution ensures better spreadability and smooth application on the skin surface.

#### **4. Stability Studies**

The formulation is evaluated under different storage conditions to determine:

- Change in color
- Alteration in odor
- Moisture variation
- Phase separation

Stability testing is essential for determining product shelf life and quality maintenance.<sup>[14]</sup>

#### **5. Irritancy Test**

The prepared face pack is applied on a small area of skin to check for:

- Redness
- Itching

- Swelling
- Irritation

Absence of these reactions indicates good skin compatibility.

#### 6. Washability

An ideal formulation should be easily removable using plain water without leaving residues on the skin.

#### 7. Spreadability

Spreadability testing determines the ease with which the formulation spreads uniformly over the skin.

#### 8. Antimicrobial Activity

The antimicrobial effectiveness of the formulation may be evaluated against common skin microorganisms including:

- *Staphylococcus aureus*
- *Propionibacterium acnes*

Phytochemicals present in herbal ingredients contribute significantly to antimicrobial effects useful in acne management.<sup>[15]</sup>

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