

## A DETAIL REVIEW ON FORMULATION AND EVALUATION OF CYPER ROTUNDUS HERBAL FACE PACK

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### ABSTRACT

Cyperus rotundus, commonly known as nut grass, is a perennial plant widely recognized in traditional medicine. This review paper explores the phytochemical composition, therapeutic applications, and potential benefits of Cyperus rotundus, particularly in skincare, highlighting its use in herbal face packs.

**Keywords-** Cyperus rotundus Botanical properties, Traditional medicine, Phytochemistry Ethnobotany, Antimicrobial activity, Antioxidant properties, Medicinal uses, Invasive species, Agricultura limpacts, Ecological significance, Therapeutic application

### 1. INTRODUCTION

Cyperus rotundus has been used in various cultures for its medicinal properties. It is rich in bioactive compounds that contribute to its efficacy in treating several health conditions, including skin disorders. This paper examines its traditional uses and modern applications, particularly in cosmetic formulations. Cyper rotundus commonly known as purple nutsedge or nutgrass is a perennial weed native to tropical regions but found worldwide.

#### Medicinal uses of Cyperus rotundus:

According to the Ayurveda, Cyperus rotundus rhizomes are considered:

• Astringent	• Diaphoretic
• Antispasmodic	• Aromatic
• Antitussive	• Carminative
• Stomachic	• Emmenagogue
• Vermifuge	• Antibacterial
• Diuretic	• Analgesic

They are used in treatment of nausea and vomiting, dyspepsia, colic, flatulence, diarrhoea, dysentery, intestinal parasites, fever, malaria, cough, bronchitis, renal and vesical calculi, urinary tenesmus, skin diseases, wounds, amenorrhoea, bronchitis, infertility, cervical cancer and menstrual disorders, and the aromatic oils are made of perfumes and splash.

#### Pharmacological Activities of Cyperus rotundus:-

<ul style="list-style-type: none"> <li>• Anti-androgenic</li> <li>• Anti-inflammatory</li> <li>• Anti-diabetic</li> <li>• Anti-diarrhoeal,</li> <li>• Cytoprotective</li> <li>• Anti-pyretic</li> <li>• Anti-acne</li> <li>• Antifungal</li> </ul>	<ul style="list-style-type: none"> <li>• Anti-mutagenic</li> <li>• Anti-microbial</li> <li>• Anti-bacterial</li> <li>• Anti-oxidant</li> <li>• Cytotoxic</li> <li>• Apoptotic</li> <li>• Anti-Candida</li> <li>• Antidandruff</li> </ul>
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#### Biological Information Of Cyper Rotundus –



**Fig 1 :-** Cyper Rotundus Diagram With Roots

**Family** - Cyperaceae

**Synonym** - Cyperus Rotundus Subsp Tuberosus Kuk

**Kingdom** - Plant Kingdom

**Division** - Magnoliophyta

**Class** - Liliopsida

**Order** - Cyperales

**Common Name** - Nut Grass, Purple Flat Sedge

**Ayurvedic Synonyms** - Musta . Mustaka. Abda

**Hindi Name** - Motha, Nagarmotha

**English Name** - Nut Grass . Coco Grass. Java Grass

**Marathi Name**- Lavhala . Motha

The Characteristics Of Cyperus Rotundus, Also Known As Purple Nutsedge, Include: Stems: Erect, Smooth, Triangular In Cross-Section, And Not Branched

**Leaves:** Dark To Bright Green, Glossy, Grass-Like, And Up To 2-6 Mm Wide And 20 Cm In Length

**Flowers:** Dull Reddish-Purple Flower Cluster

**Tubers And Seeds:** Can Remain Dormant To Survive Periodic Flooding Or Dry Seasons  
Reproduction: Reproduces Extensively By Rhizomes, Which Initially Are White And Fleshy With Scale Leaves, Later Becoming Ligneous Or "Wiry"

**Dimensions:** 2–4 Ft 7 In Tall And 0–5 In Wide

**Fruit:** Brown Or Copper Achene Flowers With Reddish-Purple To Reddish-Brown Spikelets.

Cyperus Rotundus Is A Perennial Sedge That Is A Common Weed In Tropical, Subtropical, And Temperate Areas. It Is Very Difficult To Control And Can Infest Crop Production Areas, Causing Large Losses In Crop Yields.

The Roots And Rhizomes Of Cyperus Rotundus Are Used For Medicinal Purposes, Such As Reducing Inflammation And Fever Or Relieving Pain. In India, This Species Is Used In Hair And Skin Products.

**The Characteristics Of Cyperus Rotundus, Also Known As Purple Nutsedge, Include:**

**Roots :** clarifies skin. Soothes irritation. Promote scalp health

**Stems:** Erect, Smooth, Triangular In Cross-Section, And Not Branched

**Leaves:** Dark To Bright Green, Glossy, Grass-Like, And Up To 2-6 Mm Wide And 20 Cm In Length

**Flowers:** Dull Reddish-Purple Flower Cluster

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**Chemical Constituents -**

Sesquiterpenoids	Hydrocarbons	Alkaloids
Patcholenone	Epoxides	Tannins
Sugeonyl	Ketones	Starch
Acetate	Monoterpenes	Glycosides
Sugetriol triacetate	Aliphatic alcohols	Fur chromones
Flavonoids	Gl ycerol	Sesquitepens
Kaempferol	Linolenic	Sitosterol

Luteolin	Myristic	Fatty oils
Quercetin	Stearic	Omega
Beta-pinane	Beta-rotunol	Beta-cyporone
Beta-selinene	Cyperene	Camphene
Cypolorone	Copaene	Calcium cypertundone
D -fructose	D -glucose	D -copadiene
D -epoxyguaiene	Flavones	Omega - cymene
Rotundenol	Stearic acid	Sugetriol

### Phytochemical Composition-

Cyperus Rotundus Contains Numerous Phytochemicals, Including: -

**Flavonoids:** Antioxidant Properties That Help Protect The Skin.

**Essential Oils:** Anti-Inflammatory And Antimicrobial Effects.

**Taniins:** Astringent Properties Beneficial For Skin Tightening.

**Saponins:** Enhances Skin Hydration And Smoothness.

### Traditional Uses;-

Traditionally, Cyperus Rotundus Has Been Employed For: Digestive Issues Known To Alleviate Gastrointestinal Problems.

**Skin Conditions:** Used In Poultices For Wounds And Skin Irritations.

**Antimicrobial:** Applied In Treating Infections.

### Applications In Skincare;-

The Application Of Cyperus Rotundus In Skincare, Especially In Face Packs, Is Gaining Traction Due To Its Beneficial Properties:

**Antioxidant Activity:** Helps Combat Oxidative Stress On The Skin.

**Anti-Inflammatory Properties:** Reduces Redness And Swelling, Making It Ideal For Sensitive Skin.

**Moisturizing Effects:** Aids In Retaining Skin Moisture And Enhancing Texture.

### Formulation of Herbal Face Packs -

A typical herbal face pack formulation using Cyperus rotundus may include:

Ingredients	Application .
Ground cyper rotundus root extract Powder	Hyperpigmentation. Clarifies skin irritation,antibacterial, promote skin health
Honey	Skin glowing & preservatives
Coconut oil	Moisturising effect , skin tone
Rose water	Vitamin k, vitamin b, antioxidants
Coffee powder	Antitanning properties
Gram flour	Helps treat acne

**Preparation Method:** Mix the ingredients to form a paste and apply to the face for 20-30 minutes before rinsing.

**Application of facepack :-** Antioxidant effect. Skin brightening. Skin glowing. Clarifies skin, soothes, irritation and promote skin health , treat to acne and hyperpigmentation.

**Efficacy and Research -** Recent studies indicate the efficacy of Cyperus rotundus in improving skin health: Clinical Trials: Evidence supporting its role in reducing acne and skin blemishes. User Feedback: Surveys indicate high satisfaction rates among users of herbal face packs containing this herb.

**Safety and Side Effects -** Generally considered safe when used topically. However, potential allergic reactions may occur in sensitive individuals. Patch testing is recommended before widespread used

## 2. CONCLUSION

Cyperus rotundus presents a promising natural ingredient for skincare formulations. Its rich phytochemical profile and established traditional uses support its efficacy in herbal face packs. Further research is encouraged to validate its benefits and expand its applications in modern cosmetology.

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