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Herbal Cream Formulation for Rosacea Using Cynodon Dactylon

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Abstract: *Rosacea is a chronic inflammatory dermatological condition characterized by erythema, papules, pustules, and telangiectasia primarily affecting facial skin. Conventional therapies often cause side effects such as irritation and dryness, leading to increased interest in herbal formulations. Cynodon dactylon (Bermuda grass) is a medicinal plant known for its anti-inflammatory, antioxidant, and wound healing properties. This study focuses on the formulation and evaluation of a herbal cream incorporating Cynodon dactylon extract for the management of rosacea. The prepared cream was evaluated for physicochemical properties, stability, spreadability, and anti-inflammatory activity. The results suggest that the herbal cream possesses significant potential in reducing inflammation and improving skin condition, making it a promising alternative for rosacea treatment.*

Keywords: *Rosacea*

I. INTRODUCTION

Rosacea is a chronic and relapsing inflammatory skin condition characterized by recurrent facial flushing, persistent redness, visible blood vessels (telangiectasia), and the appearance of papules or pustules, typically affecting the nose, cheeks, forehead, and chin.[1] The condition is classified into four main clinical subtypes based on dominant symptoms erythematotelangiectatic, papulopustular, phymatous, and ocular.[2] These subtypes often overlap, and individuals may exhibit a combination of features that can vary or progress over time.[3]

Rosacea is a long-term inflammatory skin condition characterized by recurring flare-ups that predominantly affect the central areas of the face and the skin around the eyes.[4] Clinically, it manifests through repeated episodes of facial flushing, persistent redness, the appearance of small inflammatory bumps (papules), and visible dilated blood vessels (telangiectasias).[5] Ocular involvement is also common, with many patients exhibiting symptoms such as eyelid margin inflammation, meibomian gland dysfunction, and blepharoconjunctivitis.[6]

In addition to skin and eye symptoms, rosacea has been linked to several systemic disorders, including hypertension, abnormal lipid levels, inflammatory bowel disease, and psychological conditions such as anxiety and depression.[7] These associations contribute to the considerable burden the disease places on affected individuals, influencing their emotional well-being, quality of life, and overall healthcare costs.[8]

In 2002, the National Rosacea Society Expert Committee (NRSEC) introduced a classification system dividing rosacea into four main subtypes: erythematotelangiectatic, papulopustular, phymatous, and ocular. [9] However, in 2016, this system was revised in light of new evidence regarding the disease's underlying mechanisms, leading to a modern, phenotype-based approach to diagnosis and classification. Current research indicates that the erythematotelangiectatic and papulopustular forms are the most frequently observed variants, with phymatous rosacea occurring more often in men, while the other types show no major sex-related difference.[10]

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Although rosacea is a common condition encountered in dermatology practice, existing treatment options—such as topical and systemic medications, laser and light-based therapies, skincare regimens, and lifestyle modifications—often produce limited or inconsistent results.

Most available treatments focus on alleviating visible symptoms rather than addressing the root causes or preventing disease progression.[11]

Therefore, effective management of rosacea remains a significant clinical challenge. [12]Selecting the optimal therapeutic strategy requires careful consideration of the clinical presentation, patient-reported symptoms, personal preferences, and the dermatologist's clinical judgment.[13]

Types of Rosacea

Rosacea is generally classified into four main types, each with distinct symptoms: Erythematotelangiectatic Rosacea (ETR):

This type is marked by constant facial redness, frequent flushing, and the appearance of small visible blood vessels on the skin.[14]

Papulopustular Rosacea (Acne Rosacea):

Characterized by red bumps and pus-filled spots that resemble acne, this form most often occurs in middle-aged women.[15]

Phymatous Rosacea (Rhinophyma):

A less common form that causes the skin, especially on the nose, to become thickened and bumpy. It is more frequently seen in men and can develop alongside other types of rosacea.

Ocular Rosacea:

This type affects the eyes and eyelids, leadg to symptoms such as redness, irritation, burning, and watery .[16]

Symptoms of Rosacea

Facial redness and flushing: The face may become red or flushed more easily than usual.

Visible blood vessels: Tiny blood vessels, especially on the nose and cheeks, can become noticeable.

Pimples and bumps: Some individuals develop acne-like bumps on the face.

Burning or stinging sensation: The skin may feel irritated, hot, or tender

Eye issues: Eyes can become red, watery, or irritated

Thickened skin or enlarged nose: In some cases, the skin, particularly on the nose, may thicken over time [17,18]

Causes of Rosacea

The exact cause of rosacea is unknown. It may result from a combination of genetic factors, an overactive immune response, or environmental triggers. Rosacea is not due to poor
hygiene, and it is not contagious.

Certain factors can trigger flare-ups, including:

Exposure to sunlight or strong winds

Consumption of hot beverages

Spicy foods

Alcohol

Extreme temperatures, either hot or cold

Emotional stress or anxiety

Physical exercise

Medications that widen blood vessels, such as some blood pressure drugs.

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Pathophysiology

Rosacea develops through multiple interacting factors, including environmental triggers, genetic predisposition, immune system dysregulation, vascular and neuroinflammatory changes, and compromised skin barrier function.

Rosacea develops due to a complex interplay of genetic, environmental, immune, vascular, and neuroinflammatory factors, along with impairment of the skin barrier.

Environmental Factor

Several external triggers can initiate or worsen rosacea. A notable factor is Demodex mites, particularly Demodex folliculorum, which are found in higher numbers in rosacea-affected skin.[19] Bacteria such as Bacillus oleronius and Staphylococcus epidermidis can intensify inflammation by attracting immune cells like neutrophils.[20] Dietary components including hot drinks, alcohol, spicy foods, and foods high in histamine or cinnamaldehyde—can activate TRP (transient receptor potential) ion channels, leading to vasodilation, inflammation, and oxidative stress.[21] Emotional stress can also worsen rosacea by influencing the hypothalamic–pituitary–adrenal (HPA) axis and triggering release of neuropeptides and inflammatory molecules from skin cells. [22]

Genetic Predisposition

Rosacea may have a genetic component, as suggested by family studies and links to autoimmune conditions. Certain gene variations, such as in glutathione S-transferase (GST), HLA class II, TACR3, VDR, and VEGF, have been associated with increased susceptibility.[23] Rare variants in genes like LRRC4, SH3PXD2A, and SLC26A8 may influence neural function and promote neurogenic inflammation, contributing to familial patterns of rosacea.[24]

Immune Dysregulation

The innate immune system is central to rosacea development. Overactivation of the TLR2-KLK5-LL-37 pathway leads to chronic inflammation:

TLR2 recognizes microbial patterns and activates intracellular signaling, resulting in pro-inflammatory cytokine release.[25]

KLK5, a skin protease, activates LL-37, an antimicrobial peptide that promotes inflammation and angiogenesis.

Mast cells play a key role in mediating inflammation and the skin's response to LL-37.[26]

The adaptive immune system also contributes. CD4+ T cells and Th1/Th17 responses release cytokines such as IFN-γ, TNF, IL-17, and IL-22, which drive inflammation and abnormal blood vessel growth. Activated B cells produce cytokines like IL-6 and TGF-β, contributing to fibrosis in phymatous rosacea.[27]

Vascular and Neuroinflammatory Dysregulation

Rosacea is associated with increased blood flow, vasodilation, and angiogenesis, causing redness and flushing. Key mediators include VEGF and LL-37, which promote blood vessel formation and permeability.[28] Neurovascular dysfunction also plays a role: sensory nerves release neuropeptides (e.g., substance P, CGRP, VIP, bradykinin) in response to triggers like UV light, heat, cold, or stress.[29]

TRP channels on nerves and skin cells detect these stimuli, leading to inflammation, blood vessel changes, and sensations of burning or itching. Specifically, activation of TRPA1 and TRPV1 contributes to the characteristic flushing and burning in rosacea.[30]

Role of Cynodon dactylon in Rosacea

Rosacea is a chronic inflammatory skin disorder that mainly affects the facial area, causing redness, flushing, papules, pustules, and visible blood vessels. It is associated with inflammation, oxidative stress, and increased sensitivity of the skin. Conventional treatments provide symptomatic relief but may cause side effects with long-term use. Therefore,

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there is growing interest in herbal medicines for safer and effective management. One such promising medicinal plant is Cynodon dactylon.

Cynodon dactylon, commonly known as Bermuda grass, belongs to the family Poaceae and is widely used in traditional Ayurvedic and folk medicine. It is known for its multiple pharmacological properties such as anti-inflammatory, antioxidant, antimicrobial, cooling, and wound-healing effects. These properties make it a potential candidate for the treatment of inflammatory skin conditions like rosacea.

One of the major factors involved in rosacea is inflammation. Cynodon dactylon contains various bioactive compounds such as flavonoids, alkaloids, glycosides, tannins, and phenolic compounds, which exhibit strong anti-inflammatory activity. These constituents help in reducing the release of inflammatory mediators, thereby decreasing redness, swelling, and irritation associated with rosacea.

Oxidative stress is another important factor in the pathogenesis of rosacea. Increased production of free radicals leads to damage of skin cells and worsening of symptoms. The antioxidant activity of Cynodon dactylon helps in neutralizing free radicals and protecting the skin from oxidative damage. This contributes to the improvement of overall skin health and reduction in disease severity.

Literature review

1. Tripathi et al. (2025) provide a comprehensive overview of the traditional uses and sacred status of C. Dactylon in India. In rural communities, fresh juice or whole-plant formulations are used for treating bleeding disorders, wounds, urinary ailments, gastrointestinal disturbances, skin diseases, and fevers.

2. Patil et al.(2025) presents Cynodon dactylon (Durva) review the therapeutic potential and healing properties of Cynodon dactylon—a perennial grass widely known as Durva in India and Bermuda grass globally. This plant has held significant cultural, traditional, and medicinal roles across centuries and regions. The authors compile traditional knowledge and emerging scientific evidence to assess its role in health and disease management.

3. Chen et al. (2023)provided updated insights into rosacea pathogenesis and mechanism-targeted treatments. The review highlighted emerging therapies focusing on inflammation control, skin barrier repair, and neurovascular modulation, and supported the exploration of safer, natural, and herbal treatment options.

4. Chang et al. (2022) performed a systematic review and meta-analysis demonstrating a significant association between rosacea and psychiatric disorders such as depression and anxiety. The study suggested that chronic inflammation and psychosocial stress related to facial appearance contribute to mental health issues in rosacea patients.

5. Das et al. (2021) and broader scientific evidence show that C. Dactylon exhibits multiple bioactivities, validating many traditional uses and suggesting additional nutraceutical potential.

6. Tavassoli et al. (2021) reviewed the ocular manifestations of rosacea and reported that conditions such as blepharitis, conjunctivitis, and keratitis are commonly associated.

The authors emphasized early diagnosis and combined dermatological and ophthalmological management to prevent complications.

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7. Hung et al. (2021) investigated the association between cutaneous inflammatory disorders and inflammatory bowel disease. Their population-based cohort study indicated shared inflammatory pathways, supporting the concept that rosacea may be a systemic inflammatory condition rather than only a skin disease.
8. Ahn and Huang (2018) discussed the pathogenesis of rosacea, emphasizing the role of innate immunity, cathelicidin peptides, Demodex mites, and vascular abnormalities. Understanding these mechanisms provides a basis for developing targeted and alternative therapeutic approaches.
9. Oussedik et al. (2018) studied the psychosocial impact of rosacea and found that the disease negatively affects emotional well-being, self-esteem, and social interactions.
The authors highlighted the importance of treatments that improve both clinical symptoms and quality of life
10. Gether et al. (2018) conducted a systematic review and meta-analysis to determine the incidence and prevalence of rosacea worldwide. The study reported that rosacea is a common condition with varying prevalence across different populations, suggesting that the disease is often underdiagnosed, especially in non-fair-skinned individuals.
11. Van Zuuren (2017) reviewed rosacea as a chronic inflammatory skin disorder affecting the central face. The study explained that rosacea involves immune dysregulation, neurovascular dysfunction, and environmental triggers such as UV radiation and heat. It was concluded that rosacea has a relapsing course and significantly affects patients' quality of life, highlighting the need for safer long-term treatment options.
12. Romanowicz et al. (2008) analyzed healthcare utilization and costs associated with rosacea and reported increased medical visits and treatment expenses. The study concluded that long-term management of rosacea imposes a significant economic burden on patients and healthcare systems.

Aim & objective

Aim

To formulate and evaluate a herbal cream containing Cynodon dactylon extract for the treatment of rosacea.

Objectives

To study the pathophysiology and clinical features of rosacea. To collect and authenticate Cynodon dactylon plant material. To prepare herbal extract of Cynodon dactylon.
To formulate a topical herbal cream using the prepared extract.
To evaluate the formulated cream for physicochemical parameters. To assess the stability and safety of the formulated herbal cream.
Plant and excipients profile Cynodon dactylon (Bermuda Grass) Biological source:
Cynodon dactylon consists of the fresh and dried whole plant of Cynodon dactylon (L.) Pers., belonging to the family Poaceae.
Parts used:
Whole plant (leaves, stem, roots).
Chemical constituents:
Flavonoids (apigenin, luteolin). Terpenoids and steroids
Carbohydrates and proteins. Carbohydrates and proteins Alkaloids and glycosides
Tannins and phenolic compounds

Uses:
Anti-inflammatory – reduces redness and swelling
Antioxidant – protects skin from free radicals Antimicrobial – prevents skin infections Wound healing – promotes skin repair
Cooling effect – soothes irritated skin
Description:

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Cynodon dactylon, commonly known as Bermuda grass or "Durva", is a widely used
medicinal plant in Ayurveda. It possesses anti-inflammatory, antioxidant, and antimicrobial properties, which make it beneficial for treating various skin disorders. In rosacea, it helps
reduce redness, irritation, and inflammation while providing a soothing and cooling effect on the skin. Due to its natural healing properties, it can be effectively incorporated into herbal creams for safer and better skin management.

Stearic Acid

Synonyms: Octadecanoic acid
Source: Plant and animal fats (commonly from palm or coconut oil) Chemical Constituents: Long-chain saturated fatty acid (C18)
Uses: Acts as an emulsifying agent and thickener
Storage: Store in a cool, dry, and well-ventilated area, away from direct sunlight, heat sources, and incompatible materials like strong oxidizing agents and bases.
Description:
Stearic acid is a saturated fatty acid that acts as an emulsifier, stabilizer, and thickening agent in creams. It imparts a smooth, spreadable texture to the cream and helps maintain
consistency and shelf stability by preventing phase separation.
Stearic acid is a long-chain saturated fatty acid derived from plant or animal fats, commonly used as an emulsifier and thickening agent in cream formulations. It plays a critical role in stabilizing emulsions, giving the cream a smooth and velvety consistency. It also acts as a surfactant, helping cleanse and soften the skin.

Cetyl Alcohol

Figure no.5

Synonyms: 1-Hexadecanol, Palmityl alcohol, Hexadecyl alcohol, Cetanol
Source: vegetable oils, most commonly palm oil or coconut oil.
Chemical Constituents: 16-carbon chain ending in a hydroxyl group
Uses: as an emollient, thickener, and emulsifier in cosmetics, skincare, and pharmaceuticals.
Storage: Store in a cool, dry, and well-ventilated area, securely sealed in its original container to prevent contamination and moisture absorption.

Description:

Cetyl alcohol is a solid, white, waxy fatty alcohol ($C_{16}H_{34}O$) derived from palm kernel or coconut oil, widely used in cosmetics as an emollient, emulsifier, and thickener. It is valued for improving texture and providing a velvety, non-greasy feel in lotions, creams, and hair conditioners.

Liquid Paraffin

Synonyms: Paraffinum liquidum, Mineral oil

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Source: Derived from petroleum (purified mixture of hydrocarbons) Chemical Constituents: Mixture of saturated hydrocarbons
Uses:
Emollient – softens and smoothens skin Moisturizer – prevents water loss
Lubricant – improves spreadability of cream
Storage:
Store in a cool, dry place, away from direct sunlight, in a tightly closed container.
Description:
Liquid paraffin is a clear, colorless, odorless oily liquid widely used in topical formulations as an emollient and moisturizer. It forms a protective layer on the skin surface, preventing
moisture loss and keeping the skin soft and hydrated. It also enhances the spreadability and texture of creams, making them smooth and easy to apply.

Beeswax
Synonyms: Cera alba (white beeswax), Cera flava (yellow beeswax) Source: Obtained from honeycombs of honey bees (Apis mellifera) Chemical Constituents:
Mixture of esters of fatty acids and long-chain alcohols, hydrocarbons, and free fatty acids
Uses:
Emulsifying agent – helps in forming stable creams Thickening agent – improves consistency
Emollient – softens and protects skin Provides protective barrier on skin Storage:
Store in a cool, dry place, away from heat and direct sunlight, in a well-closed container.

Description:
Beeswax is a natural wax widely used in cosmetic and pharmaceutical formulations. It acts as a thickening and stabilizing agent in creams and ointments. Beeswax helps to improve
texture, provides a smooth consistency, and forms a protective barrier on the skin, preventing moisture loss. It also has mild anti-inflammatory and healing properties, making it beneficial for dry and sensitive skin.

Glycerine (Glycerol)
Synonyms: Glycerol, 1,2,3-Propanetriol
Source: Derived from plant oils or as a by-product of soap manufacturing
Chemical Constituents: Simple polyol compound
Uses: Humectant, attracts water to the skin (13).
Description:
Glycerine is a polyol compound widely used as a humectant in topical formulations. It
attracts moisture from the environment and deeper skin layers, keeping the outer layer of the skin hydrated and plump. Glycerine improves skin smoothness, elasticity, and barrier
function, making it a key component in anti-aging creams (14).

Triethanolamine Synonyms: TEA, Trolamine
Source: Synthetic compound produced by reaction of ethylene oxide with ammonia Chemical Constituents: Organic compound containing amine and alcohol groups Uses:
Emulsifying agent – helps in formation of stable emulsion pH adjuster – maintains suitable pH of cream
Stabilizer – improves stability of formulation
Storage:
Store in a cool, dry place, in a tightly closed container, away from light and heat.

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Description:

Triethanolamine is a viscous, colorless to pale yellow liquid commonly used in cosmetic and pharmaceutical formulations. It acts as an emulsifier and pH adjuster, helping to stabilize oil-in-water emulsions. It improves the texture, consistency, and stability of creams, making
them smooth and easy to apply on the skin.

Plan of work

Literature review on rosacea and Cynodon dactylon
Collection and authentication of plant material
Preparation of Cynodon dactylon extract
Pre-formulation studies
Formulation of herbal cream
Evaluation of cream (pH, viscosity, spreadability, irritation test)
Stability studies
Result analysis and conclusion

Materials and Equipments

Table No. 1: List of Material with Application

Sr no	Materials	Application
1	Cynodon dactylon	Cooling agent
2	Steric acid	Emulsifier,thickner
3	Cetyl alcohol	Emoillent
4	Glycerine	Humectant
5	Methyl paraben	Preservative
6	Triethanolamine	PH adjusters
7	Water	Solvent

Table No. 2: List of Equipment

Sr no.	Equipment	Uses
1	Weighing balance	Weighing
2	Hot plate	Heating
3	pH meter	Measuring of PH
4	Thermometer	Temperature

METHOD & EVALUATION

Sr no	Ingredients	F1	F2	F3
1	Cynodon dactylon	5g	4.5g	4g
2	Steric acid	9g	7.5g	8g
3	Cetyl alcohol	6g	5.4g	5g
4	Glycerine	7.5g	6g	5.5g
5	Methyl paraben	0.3g	0.1g	0.2g
6	Triethanolamine	3g	2g	1g
7	Water	50	50	50

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Method of Preparation

1. Collection of Sample:

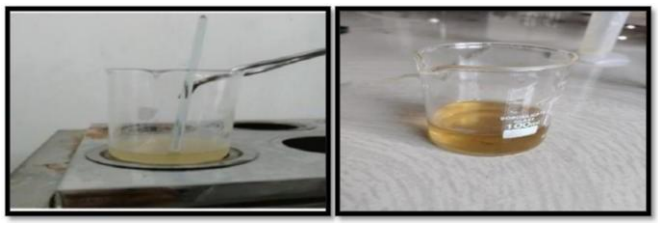
Cynodon dactylon crude drug is purchased from the market.

Aqueous Extraction (Water-based)

- Take plant powder.
- Add distilled water (1:10 ratio).
- Heat at 60–80°C for 30–60 minutes.
- Cool and filter using muslin cloth or filter paper.
- Collect filtrate (extract).

2. Preparation of Oil Phase:

Accurately weighed quantities of stearic acid, cetyl alcohol, were taken in a clean, dry beaker. The mixture was heated on a water bath at a temperature of 70–75°C until all the ingredients were completely melted. The contents were stirred continuously to obtain a uniform oil phase



3. Preparation of Aqueous Phase:

In another beaker, distilled water, glycerine, and triethanolamine were taken and heated to the same temperature (70–75°C). Methyl paraben was added to this phase as a preservative and dissolved completely to form a clear aqueous phase.

4. Process of Cream Formulation:

The hot aqueous phase was slowly added to the oil phase with continuous stirring. The mixture was stirred vigorously to form a stable oil-in-water emulsion. Proper mixing was ensured to avoid phase separation.

The prepared emulsion was allowed to cool to about 40°C. Then, the herbal active ingredient, namely Cynodon dactylon extract, was added. The mixture was stirred continuously to ensure uniform distribution of the herbal component throughout the cream.

The cream was further stirred thoroughly to improve its consistency, texture, and stability. This step ensured the formation of a smooth and homogenous cream without lumps. The prepared cream was allowed to cool gradually to room temperature with occasional stirring to maintain uniformity and prevent separation.

The final cream was transferred into a clean, dry, and airtight container. The container was properly labeled and stored in a cool and dry place away from direct sunlight.

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Evaluation Test

1. Physical evaluation:

In this test. The prepared herbal Rosacea creams were inspected visually for their colour. Appearance, odor, and consistency

2. Irritancy:

Skin irritancy test: Skin irritancy is determined with that Herbal Rosa cream formulations do Not affect The human skin cells or tissues. Irritancy may result In swelling, redness and
inflammation on the Surface of skin when some particular creams are Applied without testing. Hence skin irritancy test Was carried out by marking an area on the left hand Dorsal surface. The cream was applied with a Spatula to that marked specified area and time was Noted. Irritancy, erythema, edema was checked for Regular intervals upto 24 hours. There was no Prominent irritation because of the applied herbal Antifungal cream hence it was safe to use.

3. Washability

Take a small amount of cream Apply it evenly on the skin surface (hand or forearm). Allow it to remain for 1-2 minutes. Wash the applied area with tap water. Gently rub the area without using soap. Observe how easily the cream is removed.

pH

Eco-friendly creams should have a pH range of 5.0-6.0 to match the natural pH of man skin. The PH was Measured in each herbal antiacne cream, using a pII meter. The pH meters electrode was inserted in to the cream 10 min before the reading at room temperature. The standard pH of a topical preparation should be within the pH range matching to the pH of the skin, namely, 5.0-6.0.

Viscosity

The viscosity of formulated creams was Measured by Brook field Viscometer NDJ-SS using Spindle S 94 at varying speed and shear rates. The Measurements were done over the range of speed Setting from 0.15.0.25, 0.35, 0.45 and 0.55 rpm in 60s between two successive
speeds as Equilibration with shear rate ranging from0.25 5-1 To 1.05-1. Viscosity determinations were Performed at our room temperature.

Spreadability

The spread ability 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 spread ability. 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

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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.

Results

The herbal cream containing Cynodon dactylon was evaluated in vitro for its effectiveness in managing rosacea. It was tested for its ability to reduce inflammation and control skin-
associated microorganisms such as Staphylococcus epidermidis and other skin flora involved in rosacea flare-ups. The results supported the therapeutic potential of Cynodon dactylon in rosacea management.

The plant contains bioactive compounds such as flavonoids, phenolic compounds, alkaloids, and glycosides, which exhibit strong anti-inflammatory and antioxidant properties. These constituents help in reducing redness, irritation, and inflammation, which are the key symptoms of rosacea.

The cream also demonstrated soothing and skin-protective effects, helping to calm sensitive skin and improve skin barrier function. Its antioxidant activity aids in reducing oxidative stress, which plays an important role in the progression of rosacea.

Overall, the results suggest that Cynodon dactylon based herbal cream may be a safe and effective topical option for reducing erythema, irritation, and inflammation associated with rosacea.

Sr no	Parameters	F1	F2	F3
1	PH	5.8	5.9	6.2
2	Spreadability	10.20	10.40	10.30
3	Skin irritation	No	NO	No
4	Washability test	Easily	Easily	Easily

SUMMARY

The herbal cream containing Cynodon dactylon is developed as a natural treatment for rosacea. This cream helps in reducing redness, inflammation, and irritation associated with rosacea while improving overall skin condition. It provides essential nutrients and hydration to the skin and helps maintain the skin barrier function. The anti-inflammatory and
antioxidant properties of the plant help in soothing sensitive skin and preventing flare-ups. The effectiveness of the cream can be evaluated using various physicochemical and stability parameters.

II. CONCLUSION

Cynodon dactylon was successfully incorporated into the formulation of a herbal cream, which shows promising results as a natural treatment option for rosacea. Due to its anti-inflammatory, antioxidant, antimicrobial, and skin-soothing properties, the cream helps reduce erythema, irritation, and inflammation without causing major side effects.

Regular application may improve skin texture, hydration, and overall skin health, making it a safe and economical alternative to conventional treatments. Overall, the formulation offers a promising and effective herbal approach for the management of rosacea.

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