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Research Paper

Formulation And Evaluation of a Polyherbal Anti-Acne Face Pack

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ABSTRACT

Acne vulgaris is one of the most common skin disorders affecting adolescents and young adults. The increasing demand for herbal cosmetics has encouraged the development of natural skincare products that are safe, effective, and economical. The present study aimed to formulate and evaluate a polyherbal anti-acne face pack using natural ingredients such as Multani Mitti, turmeric, sandalwood, aloe vera, rose water, betel leaf, almond oil, manjlodhra. and Lodhra. These ingredients possess antibacterial, anti-inflammatory and antioxidant, moisturizing, and skin rejuvenating properties that help manage acne and improve skin health.The formulation was prepared by mixing the powdered herbal ingredients in suitable proportions and evaluated for various physicochemical parameters including colour, odour, texture, pH, spreadability, washability, irritancy, and stability. The prepared formulation exhibited satisfactory physicochemical characteristics, good spreadability, easy washability, and no signs of skin irritation.The results suggest that the developed polyherbal anti-acne face pack can be used as a safe, economical, and effective herbal cosmetic preparation for acne management and maintenance of healthy skin.

INTRODUCTION

The skin is the largest organ of the human It serves as a protective barrier against environmental pollutants, microorganisms, ultraviolet radiation, and physical injuries. Various skin disorders such as acne, pimples, blackheads, pigmentation, and excessive oil secretion adversely affect the physical and psychological well-being of individuals.Acne vulgaris is a chronic inflammatory disorder of the pilosebaceous unit characterized by comedones, papules, pustules, nodules, and cysts. The major factors responsible for acne development include increased sebum production, follicular hyperkeratinization, microbial colonization, and inflammation.

Herbal cosmetics have gained significant popularity due to their safety, efficacy, affordability, and minimal side effects. Medicinal plants contain bioactive compounds such as flavonoids, alkaloids, tannins, phenolics,

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glycosides, and antioxidants that provide therapeutic benefits to the skin.

The present study focuses on the formulation and evaluation of a polyherbal anti-acne face pack. One face pack was prepared using selected medicinal herbs possessing antimicrobial, anti-inflammatory, antioxidant, and skin-rejuvenating properties.

NEED FOR THE STUDY

Modern lifestyles, environmental pollution, hormonal imbalance, stress, and unhealthy dietary habits have increased the prevalence of acne and other skin disorders. Most commercially available anti-acne products contain synthetic chemicals that may cause adverse effects such as dryness, irritation, redness, and allergic reactions.

The growing demand forr herbal cosmetic products necessitates the development of safe, effective, economical, and environmentally friendly formulations.

MATERIALS USED

Sr. No	Ingredient	Scientific Name	Function
1	Multani Mitti	Fuller's Earth	Oil absorber, cleanser
2	Turmeric	Curcuma longa	Antibacterial
3	Sandalwood	Santalum album	Cooling agent
4	Aloe Vera	Aloe barbadensis	Moisturizer
5	Rose Water	Rosa damascena	Skin toner
6	Betel Leaf	Piper betle	Antimicrobial
7	Almond Oil	Prunus dulcis	Skin nourisher
8	Manjistha	Rubia cordifolia	Skin purifier
9	Lodhra	Symplocos racemosa	Astringent

Ingredients

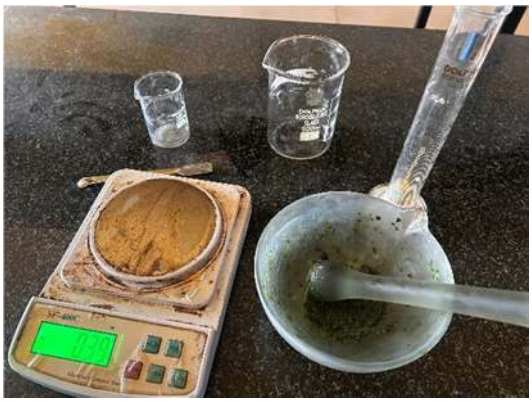
FORMULATION TABLE

Ingredient	Quantity (g)
Multani Mitti	50
Turmeric Powder	10
Sandalwood Powder	20
Manjistha Powder	15
Lodhra Powder	15

Betel Leaf Powder	10
Aloe Vera Powder	20
Almond Oil	5
Rose Water	q.s.

METHOD OF PREPARATION

1. All herbal ingredients were collected and authenticated.
2. The crude drugs were shade dried and pulverized separately.
3. The powders were passed through sieve No. 80.
4. Ingredients were weighed accurately.
5. Powders were mixed geometrically to obtain a homogeneous blend.
6. Almond oil was incorporated gradually.
7. Rose water was added during application.
8. The prepared formulation was stored in an airtight container.



Instruments

FLOWCHART OF PREPARATION

Collection of Raw Materials
↓
Cleaning and Drying
↓
Pulverization
↓
Sieving
↓
Accurate Weighing
↓
Mixing of Ingredients
↓
Addition of Almond Oil
↓
Packaging
↓
Evaluation

Procedure

EVALUATION PARAMETERS

1. **Organoleptic Evaluation**
- Colour
- Odour
- Appearance
- Texture
- Consistency

2. **pH Determination**
The pH was determined using a digital pH meter.

3. **Spreadability**
Spreadability was evaluated using the glass slide method.

4. **Washability**
Ease of removal using water was observed.

5. **Irritancy Test**
Observed for redness, itching, and swelling.

6. **Stability Study**
Stored for 30 days and monitored periodically.

RESULTS

Parameter	Observation
Colour	Light Brown
Odour	Characteristic Herbal
Appearance	Smooth Powder
Texture	Fine
pH	6.4 ± 0.2
Spreadability	Good
Washability	Excellent
Irritancy	Nil
Stability	Stable

RESULT AND DISCUSSION

The formulated polyherbal anti-acne face pack exhibited satisfactory physicochemical properties. The pH of the formulation was found to be 6.4 ± 0.2, which is compatible with normal skin pH anIt minimizes the risk of irritation. The formulation showed good spreadability and washability, facilitating convenient application and removal.
The absence of skin irritation indicates the safety of the herbal ingredients used. Multani Mitti effectively absorbed excess oil and impurities, while turmeric and betel leaf contributed antibacterial activity. Sandalwood and aloe vera

provide soothing and anti-inflammatory effects. Manjistha and Lodhra improved complexion and reduced pigmentation. Almond oil maintained skin hydration and softness.

CONCLUSION

The present study successfully formulated and evaFoFFormulated a polyherbal anti-acne face pack using natural medicinal ingredients. The formulation demonstrated acceptable physicochemical properties, good spreadability, excellent washability, and no signs of skin irritation. The herbal ingredients collectively provided antibacterial, anti-inflammatory, antioxidant, moisturizing, and skin-rejuvenating effects.

The developed formulation can be considered a safe, economical, and effective herbal cosmetic preparation for acne management and maintenance of healthy skin.

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