IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

"RESEARCH ARTICLE ON FORMULATION AND CHARACTERIZATION OF A BROAD-SPECTRUM HERBAL ANTISEPTIC CREAM WITH ENHANCED SKIN PENETRATION"

[1]Miss. Saniya S. Kadam, [2]Prof. Jyoti Shivaji Pingle, [3]Prof. Piyush Ramesh Joshi,

[4]Dr. Vivekkumar K. Redasani, [5]Prof. Kiran Hiralal Patil.

[1]Student of Final Year B. Pharmacy, [2]Professor, [3]Professor, [4]Principle, [5]Professor.

Yashoda Shikshan Prasarak Mandals, Yashoda Technical Campus, Faculty of Pharmacy, Satara 415011 India.

Corresponding Author Name - Prof. Piyush Ramesh Joshi.

Abstract:

The current research aims to formulate and evaluate a homemade antibacterial cream using turmeric, aloe vera, clove powder, and tulsi extract. These herbs are well-known for their ability to fight pathogenic organisms, reduce inflammation, and promote wound healing. The cream was made with an appropriate base and tested for qualities such as pH, texture, Spreadability, and stability. It was also evaluated for its antibacterial and antifungal properties. The results revealed that the cream had good antibacterial action and was easily absorbed by the skin. Overall, the herbal cream provides a safe and effective natural alternative to artificial antiseptics. This study underscores the potential of traditional herbal ingredients as safe and effective alternatives to synthetic topical antiseptics.

Keywords: Antioxidant, formulation, antibacterial, antiseptics, antifungal, Broad-Spectrum.

1. Introduction:

In recent years, there has been a growing interest in the use of herbal remedies and natural substances in health and beauty products. Many synthetic antiseptic creams can induce skin irritation, allergic responses, and microbial resistance. As a result, herbal formulas are becoming increasingly popular as safer, more skin-friendly options.

Now, a day's herbal cosmetics are product which are widely used in world in every generation. The goal of the research was to develop an herbal cream healing the wound and treating various skin disease and moisturizing, nourishing the skin. Skin is a fundamental component of the human body. The herbal cream is easy to apply to any damaged skin region. Herbal formulations are semisolid water in oil emulsions. This semisolid dosage form is intended for topical use on the skin to heal wounds, treat skin diseases, and maintain skin health. Ingredients are chosen for their specific capabilities, such as wound healing, anti-inflammatory, and antibacterial properties. Enzymes also have a multifunctional effect.

The purpose of this study is to create an herbal antiseptic cream with these natural substances and assess its physical qualities, antibacterial activity, and skin penetration ability. The goal is to develop a natural, efficient, and safe therapeutic treatment for minor cuts, wounds, and bacterial infections of the skin.

2. What is Herbal Antiseptic Cream:

An herbal antiseptic cream is a therapeutic preparation derived from medicinal herbal extracts that prevents or treats infections in small cuts, wounds, burns, or skin irritations. It combines herbs' natural antibacterial, antifungal, and anti-inflammatory characteristics to protect the skin, promote healing, and reduce inflammation—all without the harmful effects of chemical-based substances.

3. Main Ingredients for Herbal Antiseptic Cream:

Fig. No 1 Aloe vera, Tulsi extract, Turmeric powder, Beeswax, Vitamin E capsule, Rose Water.

4. Characteristics of Herbal Antiseptic Cream:

- Natural Ingredient
- Antimicrobial Properties
- Soothing and Healing Effects
- Moisturizing nature.
- Non-toxic and Gentle
- Multi-purpose use.
- Eco-friendly and Sustainable.

4. Formulation Profile of Herbal Antiseptic Cream:

Table No. 1 Formulation of Herbal Antiseptic Cream.

Sr. No	Ingredients	Quantity
1.	Turmeric powder	10 gm.
2.	Aloe vera	5 gm.
3.	Tulsi extract	5 ml.
4.	Beeswax	2 gm.
5.	Vitamin E capsule	2 capsules
6.	Rose Water	Q. S

5. Method of Preparation of Herbal Antiseptic Cream:

1. In a double boiler over hot water, melt beeswax and coconut oil together.
2. Remove from heat.
3. Mix the, clove oil, and Tulsi extract.
4. Stir well.
5. Let the mixture cool down, but not solidify.
6. Stir in the aloe vera gel.
7. Then, add turmeric powder and clove powder.
8. Add a vitamin E capsule along with lavender perfume. Mix thoroughly until smooth.
9. Pour the mixture into clean, sterilized containers while still soft.
10. Let it cool completely and solidify.

6. Diagrammatic Representation of Formulation Method Using Herbal Antiseptic Cream.

Fig. No. 2

Formulation Method Using Herbal Antiseptic Cream.

7. Physical Evaluation Parameter and Results of Herbal Antiseptic Cream.

Table No. 2 Physical Evaluation Parameter of Herbal Antiseptic Cream.

Sr. No	Parameter	Observation
1.	Color	Yellow to Brown
2.	Oduors	Fragrant
3.	Appearance	Soft
4.	Texture	Smooth
5.	Spread ability	Uniform

6.	**Stability**	**Stable at Room Temp.**
7.	**Consistency**	**Semisolid**
8.	**Homogenecity**	**Good**
9.	**pH**	**7.9**
10.	**Skin Irritation Test**	**No Irritation**

8. Formulated Sample of Herbal Antiseptic Cream.

Fig No. 3 Formulated Sample of Herbal Antiseptic Cream.

9. Conclusion:

In this study, a broad-spectrum herbal antiseptic cream was effectively developed using medicinal plant extracts renowned for their antibacterial activity. The cream exhibited excellent antibacterial and antifungal action against a variety of pathogenic microorganisms, indicating its efficacy as a topical antiseptic. Physicochemical analysis revealed that the formulation retained desirable properties such as acceptable viscosity, Spreadability, pH, and stability, making it ideal for topical use. The herbal cream, which is free of synthetic preservatives and harsh chemicals, provides a natural solution for wound care, minor wounds, and skin infections.

10. Conflict of Interests:

The authors declare that they have no known competing financial interests or personal relationship that could have appeared to influence the work reported in this paper.

11. Acknowledgment:

I would like to express my heartfelt gratitude to all those who contribute to the successful completion of my project on the Formulation and evaluation of a Herbal Antiseptic Cream First and foremost, I extend my sincere thanks to Ms. J.S. Pingle Mam, Mr. Piyush Joshi Sir, for their constant guidance, support, and invaluable suggestions throughout the project

I would like to express my gratitude to our B. Pharm HOD Dr. A.M Bhagwat and Hon.

Principal Dr. V. K. Redasani who gave this good opportunity to work on this entitled “Advanced Herbal Technology” Endly, like to thank and appreciate to my friends, family.

12. References:

1. Jayapal, V., Subha, V., Pradeep, J., Salwe, K. J., Manimekalai, K., Rathinamala, R., Kumar, A. R., Rayvathy, B., & Kumar, S. R. (2023). Evaluation of wound healing potential of the essential oil of Ocimum sanctum L.

2. Shivarkar, R. S., Bhise, S. B., Gupta, V. R. M., Kulkarni, N. S., & Upadhye, M. C. (2023). Formulation Development and Evaluation of a Polyherbal Suspension Containing Curcuma longa

3. Saptawati, T., Nurwidianingsih, S., Girsang, V., & Aldila, S. (2024). Basil Leaf Extract Fraction Cream Formulation (Ocimum sanctum L) as Antibacterial Against

4. Vasanthan, A., Senthil Kumar, K. L., Karthick Raja, M., & Keerthirajan.

5. M. (2025). Formulation and Evaluation of Herbal Anti-Septic Cream by Using Neem, Tulsi, Clove Oils.

6. Yadav, M., & Shukla, K. (2025…

7. Bhatt, P., & Gokhale, K. (2015). Formulation and evaluation of herbal antimicrobial cream. Journal of Pharmacognosy and Phytochemistry, 3(4).

8. Dwivedi, S., & Dubey, R. (2017). Formulation and evaluation of polyherbal antiseptic cream. Asian Journal of Pharmaceutical and Clinical Research, 10(9), 350–353 Chaudhary, A., & Goyal, S. (2019).

9. Formulation and evaluation of herbal cream containing Neem and Tulsi extract. Journal of Drug Delivery and Therapeutics, 9(4-s), 858–860.

10. Verma, S., & Singh, S. (2014). Evaluation of antimicrobial efficacy of Ocimum sanctum and Tridax procumbens against wound pathogens. International Journal of Pharmacy and Pharmaceutical Sciences, 6(9), 245 – 249.

11. Kokate, C. K., Purohit, A. P., & Gokhale, S. B. (2010).

12. Pharmacognosy (45th ed.). Pune: Nirali Prakashan.