

International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



Formulation & Evaluation of Herbal Moisturizing

Cream

Miss. Gavate Sapna Ganesh, Prof. Syed Asif, , Dr. Surwase K. P

Kishori College of Pharmacy, Beed

Abstract: Herbal cosmetics are the preparations are used to beautify and enhance the human appearances. The aim of the present research was to formulate and evaluate the herbal moisturizing containing plant extracts prepared by using water in oil method for the purpose of nourishing and moistening the skin. The moisturizing cream is prepared by using the neem oil and extract of Alovera. Quality evaluation of the formulated product was assessed by using different evaluation methods. No change of the physical properties was observed in formulated cream. The formulated cream showed good consistency and spread ability, homogeneity, pH, non-greasy, no evidence of phase separation during study period of research. Stability parameters like visual appearance, nature, viscosity and fragrance of the formulated cream showed that there was no significant variation during the study period of research. The herbal extract containing moisturizing cream gives the cooling and soothing effect due to slow evaporation of water present in the emulsion. The moisturizing creams are more moisturizing as they provide an oily barrier which reduces the water loss from the stratum corneum, the outermost layer of the skin. They are water-in-oil emulsion and intended for application on skin or accessible mucous membrane to provide localized and sometimes systemic effect at the site of application

Keywords: Herbal moisturizing cream, Hydration, Softening, Herbs, Evaluation



Herbal Moisturizing cream

I. INTRODUCTION

Moisturizing cream is semi-solid dosage form and is an emulsion of water in oil (w/o) type. Moisturizing cream is a cosmetics preparation used for moisturizing and lubricating the skin. Moisturizer is a liquid that applied on the skin softening of the skin, especially in nature dry skin. Moisturizing cream increase the skin's water content by reducing evaporation.

Cosmetics are the products which are generally used to beautify the skin and also to purify the skin .

Copyright to IJARSCT www.ijarsct.co.in



DOI: 10.48175/IJARSCT-27518





International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



The cosmetics are the word derived from Greek word – 'kosmesticos' which means to adorn. From that time the materials which are used to promoting appearances or to beautify the skin are called as cosmetics.

From the ancient time till now people are still using poly herbal or herbal cosmetics for the beautification of skin. Moisturizing cream is the water in oil emulsion. Moisturizing cream gives the prolong contact time in the site of application as compared to the other semisolid dosage form or formulation. They give elegancy to skin and it is not that much greasy. Due to the oil phase, it gives an emolliences to skin. The function of the moisturizing cream is for restoring moisture to dry skin, it allows to eliminate the waste materials from the pores and also cools the body . It is easily water washable and easy to wash away. They are non-irritating when applied on the skin. Water phase gives extra conservation to the skin. It gets liquefy at body temperature. It gets penetrated via the epidermis of the skin via the natural pores .

Aim & Objective : Aim : Formulation and evaluation of herbal moisturizing cream.

Objective :

1. To Reduce acne and skin irritation reduce skin disease dry skin wrinkles etc

2. To inhance glow to the face

3. improve skin hydration, reduce dryness, and enhance overall skin health

4. improving skin dryness without causing any negative side effects.

5. locks in moisture in your skin, preventing trans-epidermal water los

LITERATURE REVIEW

1. According TO Vijaya Sadashiv Rabade From the above results it is concluded that the formulated cream showed good consistency and spread ability, homogeneity, pH, nongreasy and there is no phase separation during study period of research. From the above study it can be concluded that the polyherbal moisturizing cream is safe to use as it is developed from herbal extract. Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. So, the values of herbs in the cosmeceutical has been extensively improved in personal care system and there is a great demand for the herbal cosmetics nowadays. An herbal cream which is non-toxic, safe, effective and improves patient compliance by the utilization of herbal extracts would be highly acceptable than synthetic ones.

2. According TO Preetha S Panicker and Manjusha MP From the Asian time aloe Vera is used for their various medicinal properties like emollient, antimicrobial, antiinflammatory, antioxidant, aphrodisiac, anthelmintic, antiseptic and cosmetic value for health care etc. Thus this could become a media to use these medicinal properties effectively and easily as a simple dosage form. The poly herbal formulation and its ingredients were studied to be consistent in quality and purity and can be easily used as face cream. So it is concluded that formulation is safe and usable for the skin

3. According TO Prashant Chavan,mallinath kalshetti,nikhil navindgikar The Eugenia caryophyllus oil, Zingiber officinale oil and Nyctanthes arbor-tristis leaves extracts having pain reliving property and prepared in polyherbal cream formulation. Formulation of cream was done by slab method and further evaluated by various evaluation parameters such as physical properties, PH,Spreadability, Washability, non-irritancy test, viscosity and phase separation of cream and gives good result

4. According To Tejswini Devidas Navgire, Madhuri Baburao Pawar From the above results it is concluded that the formulated cream showed good consistency and spread ability, homogeneity, pH, non-greasy and there is no phase separation during study period of research. From the above study it can be concluded that the polyherbal moisturizing cream is safe to use as it is developed from herbal extract.

Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. So, the values of herbs in the cosmeceutical has been extensively improved in personal care system and there is a great

Copyright to IJARSCT www.ijarsct.co.in



DOI: 10.48175/IJARSCT-27518







International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



demand for the herbal cosmetics nowadays. An herbal cream which is non-toxic, safe, effective and improves patient compliance by the utilization of herbal extracts would be highly acceptable than synthetic ones

5. According To Rajendra Gyawali, Rupesh Kumar Gupta, Sahana Shrestha Rajendra Joshi Prem Narayan Paudel A topical polyherbal cream with a strong antioxidant property was prepared in this research. The formulated cream with a pH of 5.50 has nonNewtonian positive thixotropic flow property. Stearic acid and cetyl alcohol both have a significant effect on viscosity. As the concentration of cetyl alcohol increases, the viscosity of cream increases while an increase in the concentration of stearic acid causes reduced spreadability of the cream. The formulation was optimized and important parameters like pH, viscosity, and spreadability were within the acceptable range, thus a well permeable polyherbal topical cream was developed.

6. Review of Literature on Herbal Moisturizing Cream

According to R.N. Shah and B.M. Methal (2006) in A Handbook of Cosmetic (Vallabh Prakashan), herbal moisturizing creams are highlighted for their natural and skin-friendly ingredients. The authors discuss the benefits of plant-based components such as aloe vera, neem, turmeric, and sandalwood, which offer hydration, antibacterial protection, and skin rejuvenation. The book emphasizes that herbal formulations are generally safer and more suitable for long-term use compared to synthetic moisturizers, which may contain harsh chemicals or irritants. Furthermore, Shah and Methal detail formulation techniques, stability concerns, and the role of natural emulsifiers in ensuring product effectiveness and shelf-life.

7. Arun Kumar and Divyansh (Year unknown) conducted a study on the formulation and evaluation of herbal moisturizing cream, aiming to develop a stable, skin-friendly formulation using natural plant-based ingredients. Their study included:

8. S. Sharma et al. (2017): Formulated a polyherbal moisturizing cream and reported enhanced hydration and reduced transepidermal water loss (TEWL).

9. Patel et al. (2016): Demonstrated that aloe vera and turmeric-based formulations showed good antioxidant and antimicrobial properties.

10. Rathi et al. (2018): Compared synthetic vs. herbal moisturizers and found herbal ones to be less irritating and more sustainable for long-term use.

11. hikha Singh et al. (2022) in their study, Formulation and Evaluation of Multi-purpose Herbal Cream, published in the World Journal of Pharmaceutical Research, focused on developing a topical herbal cream using a combination of Aloe vera, neem, tulsi, and turmeric extracts. The formulation was evaluated for various parameters including pH, spreadability, homogeneity, stability, and skin irritation. The cream exhibited favorable physical properties and was found to be stable over time. It also demonstrated good moisturizing and antimicrobial properties, reinforcina the potential of plant-based ingr : in skincare.

12. Studies by Ravindra et al. (2015) and Deshmukh et al. (2017) on polyherbal formulations further support the synergistic effects of combining multiple herbal extracts. These creams not only improve skin hydration and barrier function but also aid in managing mild dermatological conditions without the adverse effects associated with synthetic agents.

PLAN OF WORK :

Literature Review \downarrow Selection of drug material \downarrow Study the monograph and chemical constituents \downarrow Extraction of crude drugs \downarrow Preparation of cream base

Copyright to IJARSCT www.ijarsct.co.in







International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



Incorporation of cram base ↓ Formulation of cream

Ļ

Evaluation test

Benefits of Moisturizing Cream :

- Helps fight signs of ageing.
- They rehydrate the skin and prevent it from getting dry.
- It works as a protective layer against harmful rays and pollutants that damage the skin.
- provides nourishment to the skin.

Ideal Properties of Moisturizing Cream

- It should not be irritating and poisonous.
- It should be non-inflammatory and non-allergic.
- It should be easy to spread over the skin.
- It should reduce dryness.
- It should able to leave the skin feeling soft rather than sticky.
- It should be convenient .
- It should be easy to apply.

Advatages:-

- It helps to fight wrinkles.
- Moisturizing reduces the chances of the skin problems.
- Moisturizing helps your skin stay young.
- Non-irritating when applied to the skin.
- Easily water washable.
- Easy to spread on the skin's surface.

Disadvantages:-

- Less stable as compared to ointment.
- They are difficult to hide taste and odour.
- Most of herbal drugs are not easily available.
- Manufacturing process are time consuming and complicated.
- Most of herbal drugs are not easily available.

٠

INGREDIENTS (MATERIALS) USED IN FORMULATION:-

In formulation of herbal moisturizing cream, lots of ingredients are used. Aloe-vera:-









International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



It stimulates fibroblast which produces the collagen and collagen lelps to skin hydration. Mono co-polysaccharides helps in binding moisture into the skin.

Biological Source:-

Aloe is optained from the dried juice of leaves of Aloe Barbadensis Miller.

Family:- Liliaceae.

Chemical Constituents:-

It contains anthracene glycosides, cinnamic acid, coumaric acid, and vitamins A, B and C.

Uses:-

- It is used to treat skin problems.
- It is used as anti-bacterial and anti-inflammatory agent.
- It is used for hydrating the skin.
- It is used for softening of the skin.

Extraction of Aloe vera:-





International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



Bees wax:-

- It is used as a stablizing agent.
- It contains strong healing, anti-septic anti-inflammatory properties.
- It repairs damage, promotes the skin's regeneration and creates hydration.

Borax:-



• It is used as emulsifier agent.

• It is added to remove skin bacteria, and dead skin cells.

Methyl Paraben:-



• It is used as preservative.

• They prevent harmful mold, bacteria, and fungi from infecting your products.

Coconut Oil:-



• It is used as emollients.

• It is helping heal wounds.

• It is reducing inflammatory.

Copyright to IJARSCT www.ijarsct.co.in



DOI: 10.48175/IJARSCT-27518





International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



Vitamin E :-



- It is used as anti-oxidant.
- It can lighten skin.

Jasmine Oil:-



• It is used for fragrance.

• It gives moisturizing effect.

Preparation of Moisturizing Cream :-

Formulation can be prepared by adding two different phases which are as follows.

Phase 1: Melt the solid ingredients by indirect heat then add all the oils in it and stir well. Phase 2: Dissolve the borax in water with the help of heat. While still hot add the phase 1 into the phase 2 gradually with constant stirring to the wax and oil mixture. Continue this process for 5 minutes, stir all the time then remove from the heat and stir until it gets moisturizing. As compare to other creams this cream may be made heavier by adding more wax.

Table no.1: Formulation table for herbal moisturizing cream (for 100 gm)

Tuble Ho.T. Torinductori auto for herour moisturizing eream (for 100 gm)				
Sr.no	Ingredients	Quantity	Roles	
1	Beeswax	15gm	Stabilizing agent	
2	Vitamin E	1.5 ml	Antioxidant	
3	Aloe vera	9gm	Moisturizer	
4	Neem oil	6ml	Antiseptic heal wounds	
5	Coconut oil	1.5ml	Emollient	
6	Powered borax	0.5gm	Alkaline agent	
7	Jasmine oil	15 ml	Fragrance	
8.	Methyl paraben	0.02gm	preservative	

Sr.no Ingredients Quantity Roles Copyright to IJARSCT www.ijarsct.co.in



DOI: 10.48175/IJARSCT-27518





International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



Evaluation of Cream:

1) physical properties:

The cream was observed for the colour, odour and appearance .

2) Washability:

The cream was applied on the hand and observed under the running water.

3) pH:

The pH meter was calibrated with the help of standard buffer solution. Weigh 0.5 gm of cream dissolved it in 50.0ml of distilled water and its p H was measured with the help of digital pH meter.

4) Viscosity:

Viscosity of the cream was determined with the help of Brookfield viscometer at 100 rpm with the spindle no. 7.

5) Spread ability test :

The cream sample was applied between the two glass slides and was compressed between the two-glass slide to uniform thickness by placing 100 gm of weight for 5 minutes then weight was added to the weighing pan. The time in which the upper glass slide moved s=weight tight to upper slide l =length moved on the glass slide t =time take

6) Irritancy test:

Mark an area (1sq.cm) on the left-hand dorsal surface. The cream was applied to the specified area and time was noted. Irritancy, erythema, edema, was checked if any for regular intervals up to 24 hrs. and reported.

7) Test for microbial growth:

Agar media was prepared then the formulated cream was inoculated on the plate's agar media by steak plate method and a controlled is prepared by omitting the cream. The plates were placed in the incubator and are incubated in 37 C for 24 hours. After the incubation period, the plates were taken out and the microbial growth were checked and compared with the control.

8) Saponification value:

Take 2 gm of the substance and reflux it with the 25 ml of 0.5 N alcoholic KOH for 30 minutes. Then add 0.1 ml of phenolphthalein as a indicator and titrate it with the 0.5 N HCL.

Saponification value=(b-a) *28.05/W a =volume of titrate b=volume of titrate w =weight of substances in gram

9) Acid value:

Take 10 gm of the cream dissolved in accurately weighed in 50 ml mixture of the equal volume of alcohol and solvent ether. Then attached the flask with the condenser and reflux it with the slow heating until the sample gets completely dissolve then add 1 ml of phenolphthalein and titrate it with 0.1 N NaOH until it gets faint pink color appears after shaking in 20 seconds. [9][10][11] Acid value=n*5.61/w w =weight of the substances n =the number of ml in NaOH required.

10) Dye test:

The scarlet red dye is mixed with the cream. Place a drop of the cream on a microscopic slide then covers it with a cover slip, and examines it under a microscope. If the disperse globules appear red the ground colourless. The cream is o/w type. The reverse condition occurs in w/o type cream i.e. the disperse globules appear colourless.

11) Homogeneity:

Homogeneity was tested via the visual appearance and test.

Copyright to IJARSCT







International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



Result & Discussion :

After formulation and evaluation of herbal moisturizing cream, we observed various types of result with the help of various method or techniques like physical evaluation, irritancy, phase separation, greasiness, viscosity, pH washability and stability.

Sr.no	Parameters	Evaluation
1	Colour	Pale white
2	Odour	Pleasant
3	Texture	Smooth

1. Washability:

The cream applied on skin was easily removed by washing with tap water

2. pH of the cream:

The pH of the cream was found to be in range of 6.5 to 7.2 which is good for skin pH. The herbal formulation was shown pH nearer to skin required i.e. pH 7.1.

3. Viscosity:

Viscosity of formulated cream was determined by brook field viscometer at 20 rpm using spindle no. LV-4(64). The viscosity of cream was in the range of 499990 to 30000cp which indicates that the cream is easily spreadable by small amount of shear. The formulated cream shows the viscosity within range i.e. 48880cp

4. Spread ability test:

The spread ability test showed that the formulated cream has good spreadable property.

5. Irritancy test:

The formulated cream shows no redness, oedema, irritation and inflammation during studies. The formulated cream is safe to use.

6. Test for microbial growth: There was no signs of microbial growth after 24 hrs. of incubation at 37°C and it was comparable with the control.

7. Saponification value:

The saponification value results of formulated cream is shown in table no. 3 and showed satisfactorily values.

Final Product :



Copyright to IJARSCT www.ijarsct.co.in



DOI: 10.48175/IJARSCT-27518





International Journal of Advanced Research in Science, Communication and Technology

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 5, Issue 3, June 2025



II. CONCLUSION

Thus from the results, in the study Aloe vera was explored for its moisturization property on skin. It can be concluded Aloe vera extract increases the skin hydration & can be effectively used as moisturizing agent in formulated cream.

REFERANCES

1. Formulation and evaluation of herbal moisturizing cream by Arun kumar, Divyansh, Neha Ansari, Rahul Shukla, Gangeswar Pratap Singh, International journal of pharmacy and pharmaceutical research.

2. Formulation and evaluation of herbal moisturizing cream containing sunflower wax by Avish D. Maru, Swaroop R. Lahoti, International journal of pharmacy and pharmaceutical science.

3. https://www.jetir.org/papers/JETIR2206A10.pdf

4. https://www.ijfmr.com/papers/2023/2/2605.pdf

5. https://journals.innovareacademics.in/index.php/ijpps/article/view/28645/16009

6. Formulation and Evaluation of Herbal Moisturizer for wound healing (2017) by Jamshiya Shamsu. The Tamilnadu Dr. M.G.R Medical University, Chennai.

7. Formulation and Evaluation of Moisturizing Cream using Amaranthus Cruentus Seed oil (2021) by Miss. Riya A. Patil, Dr. Suchita G. Mahalle & Mr. Aditya S. Pawar . International Journal of Advance Study and Research Work (2581-5997) / Volume 4/ Issue 3.

8. Formulation and evaluation of herbal multipurpose cream by LaxmiBanjare * and PranitaKashyap . International Journal of Pharmacy & Therapeutics .

9. Nair SS, Mathew M, Sreena K. Formulation and evaluation of herbal cream containing Curcuma longa . Int J Pharm Chem Sci. 2012 ; 1 (4) : 1362-1368.

10. Formulation and evaluation of multi-purpose herbal cream by Jahanvi P. Patel * , Anu

11. V. Patel , Anar J.Patel and Hemal J. Bhavsar International Journal of Recent Scientific Research , (2022) Vol. 13 , Issue , 06 (A) . pp . 1617-1620.

12. Formulation and evaluation of multi purpose herbal cream by Shikha Singh (2022), Syed Yasoob Zaidi and shashikant maurya * World Journal of Pharmaceutical Research.

13. R.N. Shah, B.M.Methal, (2006) A Handbook of Cosmetic, Vallabh Prakashan.

14. Saraf, S., & Kaur, C. D. (2010). Phytoconstituents as photoprotective nove cosmetic formulations. Pharmacognosy reviews, 4(7), 1.

15. Sanmathi. B.S., Kalpesh K. Mehta, Anshu Gupta (2016). Dispensing Pharmacy A Practical Manual (p.p. 389-399). Pharma Med Press.

16. C.K.Kokate ,A.P.Purohit, S.B.Gokhale (2014) Textbook of Pharmacognosy. Nirali Prakashan 50th edition, p.p. 9.1 & 14.132.

17. S. S. Khadabadi, S.L. Deore, B.A. Baviskar.(2014), Pharmacognosy and Phytochemistry, A Comprehensive Approach, published by PharmaMed Press, 1st edition, p.p.8.4

18. Panda, H. (2000). Herbal Cosmetics Hand Book. National Institute of Industrial Re.

19. Mali, A. S., Karekar, P., & Yadav, A. V. (2015). Formulation and evaluation of multipurpose herbal cream. International Journal of Science and Research, International Journal of Science and Research, 4(11), 1495-1498.

20. Prasanna A. Datar.(2013) Formulation and evaluation of polyherbal gel prepare using Carbopol 934 for treating skin disease in comparison with ointment using emulsifying ointment, Research and Reviews: Journal of Pharmaceutics and Nanotechnology, 1(1): 20- 21

21. Sk. Uddandu Saheb*, Aduri Prakash Reddy, K. Rajitha, B. Sravani, B. Vanitha, (2018). Formulation and Evaluation of Cream from containing plant extracts, World Journal of Pharmacy and Pharmaceutical Sciences, 7(5):851-862

22. N. R. Patel, H. U.Momin, R.L. Dhumal, K, L. Mohite, (2017), Prepara preparation and evaluation of multipurpose herbal cream, Adv Pharm Life sci Res;5(1);27-32

23. Himaja, N. (2017). Formulation and Evaluation of Herbal Cream from Azadirachta indica Ethanolic Extract. IJournals: Int J Res Drug Pharm Sci, 1(1), 23-6.

24. Mukherjee, P. K. (2002). Quality control of herbal drugs: an approach to evaluation of botanicals. Business Horizons.

Copyright to IJARSCT www.ijarsct.co.in



