WJPMR, 2025, 11(11), 44-47

Review Article

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Impact Factor: 6.842

ISSN (O): 2455-3301

ISSN (P): 3051-2557

Coden USA: WJPMBB

A REVIEW ON FORMULATION AND EVALUATION OF HERBAL LIP BALM WITH SPF

Sakshi A. Temak[1*], Shruti K. Bhagyawan[2], Om R. Mandule[3], Komal Sabale[4]

Student[1,2,3], Assi. Professor[4]

Department of Pharmacy, Mrs. Saraswati Wani College of B. Pharmacy, Ganegaon, Rahuri, A.Nagar, Maharashtra, India.

***Corresponding Author: Sakshi A. Temak**

Student, Department of Pharmacy, Mrs. Saraswati Wani College of B. Pharmacy, Ganegaon, Rahuri, A.Nagar, Maharashtra, India.

DOI: https://doi.org/10.5281/zenodo.17482609

How to cite this Article: Sakshi A. Temak*, Shruti K. Bhagyawan, Om R. Mandule, Komal Sabale (2025). A Review on Formulation and Evaluation of Herbal Lip Balm With Spf. World Journal of Pharmaceutical and Medical Research, 11(11), 44–47.

This work is licensed under Creative Commons Attribution 4.0 International license.

Article Received on 21/09/2025 **Article Revised on 11/10/2025** **Article Published on 01/11/2025**

ABSTRACT

Herbal lip balms have gained significant attention as natural alternatives to conventional lip care products due to their moisturizing, protective, and therapeutic benefits derived from plant-based ingredients. This review paper discusses the formulation, evaluation, and efficacy of herbal lip balms, emphasizing their role in providing natural sun protection alongside nourishment and hydration. Ingredients such as candelilla wax, kokum butter, almond oil, natural oils rich in antioxidants (e.g., karanja seed oil, carrot seed oil), vitamin E, and multifunctional properties including UV protection, anti-inflammatory action, and skin barrier restoration. The stability and consumer preferences toward herbal lip balms highlight their advantages over synthetic formulations, which may contain harmful chemicals. Furthermore, it addresses the challenges and future prospects in developing herbal lip balms that effectively protect lips from environmental stressors like UV radiation, dryness, and pollution, while promoting natural lip health.

KEYWORD: Herbal lip balm, Lip care, Chemical Free, Natural Spf, Cell regeneration, Moisturizing, Nourishment.

I. INTRODUCTION

Herbal lip balms with built-in sun protection are becoming popular substitutes for traditional lip care products since they provide protection from environmental stressors and nourishment. The lips need specialist care that integrates hydration, healing, and protection in one product because they are extremely sensitive and prone to dryness and photodamage. Certain botanicals also operate as natural UV protection agents, while plant-based waxes, butters, oils, and herbal extracts have emollient, antioxidant, and antibacterial properties. By adding these bioactive ingredients to lip balm formulations, the danger of oxidative stress and UV-induced accelerated ageing is decreased in addition to helping to restore suppleness and barrier function.

In addition to improving skin health, the use of natural, biodegradable materials is a reflection of consumers' increasing desire for sustainable and environmentally friendly personal care products. All things considered, herbal lip balms with built-in sun protection are a prime example of the promise of phytocosmetic advancements, striking a balance between safety and effectiveness while attending to dermatological requirements as well as environmental concerns.

Fig 1: Lip Balm.

Why You Should Use Natural Lip Balm

There are various advantages to using an herbal lip balm with an SPF of natural sun protection. In addition to giving the sensitive skin of the lips the necessary

moisture and nourishment, these lip balms shield the lips from damaging UV rays, avoiding sun damage, pigmentation, dryness, and early ageing.These lip balms are safer and healthier than synthetic equivalents since the natural ingredients frequently contain extra healing, anti-inflammatory, and antioxidant qualities.

Benefits Of Lip Balm With Spf

1. Protects against harmful UVA and UVB rays.
2. Prevents sunburn, darkening, and pigmentation.
3. Hydrates and moisturises deeply.
4. Heals dry, chapped lips.
5. Provides antioxidant and anti-inflammatory benefits.
6. Acts as a barrier against environmental damage.
7. Free from harmful synthetic chemicals.

INGREDIENTS

Sr.no.	Name of Ingredients	Uses
1.	Candelilla wax	Base, provide texture and helps create a protective barrier.
2.	Kokum butter	Emollient, deeply hydrates.
3.	Karanja seed oil	Natural SPF, anti-microbial.
4.	Carrot seed oil	Strong SPF, regenerationskin cells.
5.	Alovera gel powder	Healing, hydrating agent.
6.	Hibiscus powder	Natural colorant & Antioxidant.
7.	Vitamin E	Preservative, anti-oxidant

II. MATERIAL AND METHODS

The herbs use in the preparation of herbal lip balm

1. Candelilla wax

Fig 1.1: Candelilla wax.

Scientific Name :- Euphorbia cerifera.
Synonyms :- Candelilla cera.
Biological Source :- Candelilla wax is derived from the leaves and stems of the candelilla shrub.
Family :- Euphorbiaceae.
Therapeutic activity:- Anti-inflammatory, Antioxidant, Support Wound Healing, SupportCarrier for Active IngredientsMoisture Retention.
Uses:- Provides firmness and shape.
Moisturizes and soft lips.
Forms protective barrier.
Vegan alternative to beeswax.
Stabilizes oils and ingredients.

2. Kokum butter

Fig 1.2: Kokum Butter.

Scientific Name:-Garcinia indica.
Synonym :-Kokum, Goan Butter Tree.
Biological Source:-Kokum butter is obtained from the seeds of the fruits of Garcinia indica Choisy.
Family:-Clusiaceae (previously Guttiferae).
Therapeutic activity:-Emollient (deeply moisturizing), Skin regenerative and healing, Anti-inflammatory, Antioxidant (rich in vitamin E and polyphenols), Protective barrier against dryness and chapping.
Uses :-Provides long-lasting moisturization without greasiness.
Helps in repairing cracked and chapped lips.
Improves lip softness and smoothness.
Protects lips from oxidative stress and sun-induced damage.

3. Carrot seed oil

Fig. 1:3 Carrot seed oil.

Scientific Name:-Daucus carota.
Synonym:-Carrot seed essential oil, Wild carrot oil.
Biological Source:-Volatile oil obtained from the dried seeds of Daucus carota (carrot plant).
Family:-Apiaceae (Umbelliferae).
Therapeutic activity:-Antioxidant (rich in carotenoids, vitamin A precursors), Anti-inflammatory, Cell regenerative and healing, Natural sunscreen (provides mild SPF activity), Antimicrobial (protects against infections).
Uses :-Acts as a natural SPF booster (protects lips from UV damage).
Helps in cell regeneration and repair of chapped lips.
Provides antioxidant protection against premature aging and dryness.
Improves lip texture, softness, and elasticity.

4. Karanja seed oil

Fig.1:4 Karanja seed oil.

Scientific Name :- Pongamia pinnata (L.).
Synonym:-Pongam oil.
Biological Source:- Oil obtained from the seeds of Pongamia pinnata tree.
Family:-Fabaceae (Leguminosae).
Therapeutic activity:-Antimicrobial (antibacterial, antifungal, antiviral), Anti-inflammatory, Antioxidant, Wound healing and regenerative, Natural sunscreen (contains flavonoids and karanjin that provide UV protection.
Uses :-Acts as a natural SPF agent protecting lips from sun damage.
Helps in healing cracked, dry, and chapped lips.
Provides antimicrobial protection against lip infections.
Supports long-lasting hydration and barrier protection.

5. Alovera gel powder

Fig.1:5 Alovera gel powder.

Scientific Name:-Aloe vera (L.)
Synonym:-Aloe, Ghritkumari
Biological Source:-Dried powder obtained from the mucilaginous gel present in the leaves of Aloe vera.
Family:-Asphodelaceae (earlier Liliaceae).
Therapeutic activity:-Moisturizing and emollient, Anti-inflammatory, Antioxidant, Wound healing and regenerative, Antimicrobial (mild antibacterial & antifungal).
Uses:- Provides hydration and soothing effect to lips
Helps in healing cracked or sunburned lips
Reduces lip inflammation and irritation
Improves lip smoothness and softnen

6. Vitamin E

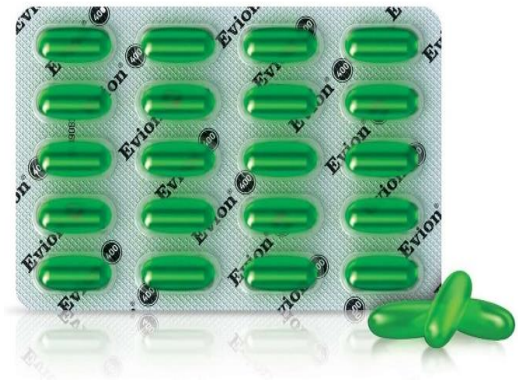

Fig.1:6 Vitamin E (capsules).

Scientific Name:- Tocopherol (Fat-soluble vitamin).
Synonym:- Eprolin.
Biological Source:-Vitamin E is obtained from various foods and oils.
Family:- Tocopherols.
Therapeutic activity:- Antioxidant, anti-inflammatory, skin healing.
Uses :- Preserves oils and prevents rancidity.
Softens and nourishes lips.
Protects lips from free radicals and environmental damage.

7. **Hibiscus flower powder**

Fig.: 1:7 Hibiscus flower powder.

Scientific Name:- Hibiscus rosa-sinensis.
Synonym:-China Rose.
Biological Source:-Dried flowers of Hibiscus rosa-sinensis plant.
Family:-Malvaceae.
Therapeutic activity:-Moisturizing, Exfoliating, Antioxidant, Anti-inflammatory
Uses :- Gives lips a delicate pink or crimson hue without the use of artificial colouring.
Removes dead skin cells for smoother lips.
Protects lips from free radicals and environmental damage.
Helps keep lips soft and hydrated.

Evaluation Tests for Herbal Lip Balm with SPF

A. Organoleptic Evaluation.
B. Determination of pH.
C. Active Ingredient.
D. Test of spreadability.
E. SPF Evaluation.
F. Microbial load.
G. Stability test.
H. Irritation test.

III. CONCLUSION

The cosmetics sector is doing very well because of the high demand for beauty-enhancing products. This study has examined the state of natural lip balm with SPF products as of right now. The natural components, formulation techniques, evaluation, and applications of lip balm were all examined in this study. Therefore, it is possible to draw the conclusion that a thorough literature review of natural lip balm products has been conducted, demonstrating the broad potential for these products in the future.

REFERENCES

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6115631/
2. https://www.sciencedirect.com/science/article/pii/S2214785320305726https://www.mdpi.com/2079-9284/8/3/61
3. https://www.researchgate.net/publication/352517923_Formulation_and_Evaluation_of_Herbal_Lip_Balm
4. https://www.ijpsr.com/bft-article/formulation-and-evaluation-of-natural-lip-balm-containing-herbal-active-ingredients
5. https://www.ijsrp.org/research-paper-1118.php?rp=P838106https://www.pharmainnovation.com/archives/2020/vol9issue7A/PartA/9-6-18-774.pdf
6. https://pdfs.semanticscholar.org/fe3c/8bce45e2f2488e931e6b60dcf08a71b22a56.pdf
7. https://www.ijpsjournal.com/article/Formulation-and-Evaluation-of-Herbal-Lip-Balm.pdf
8. https://www.researchgate.net/publication/343759194_Herbal_Based_Cosmetics_Formulation_and_Evaluation
9. https://www.academia.edu/42253979/Formulation_and_Evaluation_of_Herbal_Lip_Balm
10. https://www.researchgate.net/publication/366541836_Formulation_and_Characterization_of_Herbal_Lip_Balm_with_Natural_SPF
11. https://pharmajournal.net/archives/2020/vol9issue2/PartB/9-1-83-303.pdf
12. https://www.iaeme.com/MasterAdmin/Journal_uploads/IJARET/VOLUME_11_ISSUE_7/IJARET_11_07_208.pdf
13. https://www.researchgate.net/publication/353132064_Evaluation_of_Sun_Protective_Factors_from_Herbal_Extracts
14. https://www.sciencedirect.com/science/article/abs/pii/S0975236118300453https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2836431/
15. https://www.researchgate.net/publication/348214235_Formulation_of_SPF_Based_Herbal_Product
16. https://www.academia.edu/82523045/Natural_Phytoconstituents_for_Sun_Protection