

FORMULATION OF NATURAL LIP BALM

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Abstract:-

Demand for natural products has grown recently, notably in the cosmetics sector. One of the most popular cosmetic items, lip balm serves the dual purposes of colouring the lips and preventing dryness. While the components in synthetic sources have many negative effects, the phrase "herbal" is a sign of security. Popular herbal products include tonics, pastes, lotions, shampoos, pills, and lip balm. The main purposes of lip balm are to improve the appearance and feel of the lips. Non-chemical lip balms moisturise, hydrate, and protect lips that are prone to chapping and dryness. They support preserving the lips' innate good looks and health. Because lip balms are not gender-specific, both men and women use them.

Keywords:- Herbal, preparation, Lip balm, Cosmetics, lips, Skin

1. Introduction:-

The demand for herbal cosmetics is rising today on the global market. The demand for herbal goods is increasing globally. Nowadays, it is increasingly usual to utilise herbal goods, and people are looking to use more herbal cures to change their lifestyles and live a more natural lifestyle. In many commercial cosmetic formulations, botanical extracts that support the health, texture, and integrity of skin and hair are employed. The use of products has grown recently, and the selection of colours, textures, and shine tints has changed and gotten wider.^[1]Lip colouring is an age-old technique for enhancing lip beauty and adding a glamorous touch to face makeup. This is apparent. To meet demand, hundreds of colours of lipstick, lip balm, and other products are sold.^[2]The goal of this endeavour was to thoroughly study natural lip balm. Organoleptic qualities such as colour, odour, spreadability, pH, melting point, skin irritancy, and product consistency are assessed for these items. A product's colour can also be used to determine its quality and freshness. However, natural hues are less harmful to the environment than manufactured ones.^[3]Lip balms are substances that are applied to the lips to prevent drying and offer protection from harmful environmental elements. Even while softening and rupture Points are properties that are unrelated to one another, the substances employed in a formulation like lip balm may have an unfavourable impact on them.^[4]Lip balm is a term used to describe products that can be applied to the lips to ward against drying and protect them from harmful elements. Lip balms are frequently eaten by the user, so it's critical that the ingredients are safe for consumption [5]. Since lips lack oil glands, it is crucial to provide extra moisture and protection all throughout the [3].

1.1 Lip Balm :-

Lip balm is a cosmetic product that both men and women use to keep their lips healthy. It is used to preserve the shape and appearance of the lips and guard against sores and cold sores on the affected lips^[6]. The concentration of the key components, such as butters, oils, and waxes, must be balanced while creating lip balms^[7] [8]. The formulation will exhibit various properties depending on the ratio of wax, oils, and pigments^[9].

1.2 Lip Disorders:-

1. Swelling:-

Lip swelling due to an allergic response is possible. A sensitivity to specific meals or beverages, medications, lipstick, or airborne irritants may be to blame for the reaction. [10]

2. Sun Damage:-

The lips, especially the lower lip, may become dry and hard from sun exposure. This kind of harm can be minimised by applying sunscreen-containing lip balm to the lips or by wearing a wide-brimmed hat to protect the face from the sun’s harmful rays[11].

3. Inflammation:-

The corners of the mouth may become uncomfortable, itchy, red, cracked, and scaly when there is lip inflammation (cheilitis). A diet that is deficient in vitamin B2 might cause cheilitis.

1.3 Types of lip balms :-

1. UV filter lip balm :-

This sort of lip balm can be used all year long, but it is especially beneficial in the summer or when visiting an area with more solar activity. (e.g. mountain ski resorts).

2. Nourishing lip balm :- This type works best in winter.

3. Moisturizing lip balm :-

Your lips may split if you use this lip balm in the cold since it absorbs too quickly. For dry lips, this kind of lip balm is beneficial. You can use moisturising lip balm all year long.

4. Medicated lip balm :- It should be applied with care. It acts as a softening and antiseptic medication.

5. Tinted Lip balm :-You can wear tinted lip balm year round [12]

1.4 Advantages of Natural Lip Balm:-

- It help to protect lips affected by cold Sores, chapping and dryness [13].
- The use of natural lip balm to treat the appearance of The face and condition oskin[14].
- It Moisturises Dry Lips[14]

1.5 Disadvantages of Natural Lip Balm:-

- Other drawbacks of natural oils include the fact that they are greasier, comedogenic, and less spreadable[13].
- Lip balm addiction is another drawback that is typically associated with its use.
- Some lip balms include allergens in them that can result in a rash.
- Other drawbacks of natural oils include the fact that they are greasier, comedogenic, and less spreadable. [15-18]

2. Materials:-

All the Natural Ingredients were Purchased from trusted Supplier. Which are used in formulation

Table No. 1- Formula for Herbal Lip Balm

Sr. No.	Ingredients	Quantity	Category
1.	Bees Wax	5%	Glossiness
2.	Ghee	2%	Moisturizer
3.	Castor oil	15%	Emulsifier
4.	Honey	5%	Lighten up darker lips
5.	Vanillin	0.08%	Flavouring agent
6.	Vitamin E	5%	Antioxidant, preservative

2.1 Formulation:-

Weigh each and every excipient. In a beaker, combine ghee, beeswax, castor oil, and sunflower oil. Melt the mixture in a water bath at 55 to 60°C. Vitamin E and honey should be thoroughly mixed in the beaker to prevent honey from clumping. VANILLIN FLAVOR is added. Fill the lipstick moulds with the mixture. Before putting the mixture into the lipstick moulds, use a cotton swab to add glycerin to the mould. Placing the filled Forms in an ice bath for ten minutes.

2.3. Evaluation Parameters of lip balm :-

The performance of a lip balm product can be used to judge its quality. There are several reasons why evaluation parameters are important for any product. Along with the product's consistency and purity, it helps to preserve stability. This section provides a description of the primary evaluation criteria for lip balm products. From the standpoint of the user, the aesthetics of cosmetic items are quite important. This comprises the product's colour, flavour, and texture [15].

- **Spreadability Test :-**

By applying lip balm to a glass slide, spread-ability analysis was performed, and any deformation and breakdown were assessed in accordance with Fernandes et al[19]. 's explanation. The analyst defined the following standards for this test:

G – Good: consistent, doesn't leave pieces, flawless application, doesn't cause the lip balm to deform;

I – Intermediate: consistent, few fragments are left behind, proper application, and minimal lip balm deformation;

B – Bad: Lip balm is severely deformed; application is difficult or improper; and there are numerous fragments left behind.[21]

- **Hardness Analysis :-**

For this investigation, the AMETEK Brookfield CT3 Texture Analyzer was used to analyse hardness. This test was run to evaluate the lip balm's hardness. Because Probe TA 39 is the most appropriate Probe to Measure Lip Balm's Hardness [22], it was used.

- **Skin Irritation Test :-**

It is carried out by applying lip balm on the skin for 10 minutes[23]

- **pH parameter :-**

Measurement: To determine the pH, 1 g of sample was dissolved in 100 ml of water. A pH metre was used to measure pH[24].

- **Organoleptic properties :-**

Organoleptic characteristics of the lip balm, such as colour, odour, taste, and appearance, were examined[25].

- **Melting point :-**

The substance was made molten to fill capillaries in order to ascertain the melting point (duplicate). The capillaries were connected to a thermometer-equipped device and submerged in a vial of water that was kept at a set temperature. The melting point of a lip balm sample was defined as the temperature at which melting occurred [7].

- **Perfume stability :-**

After 30 days, the herbal lip balm underwent testing to record its fragrance[26–27].

- **Surface anomalies :-**

This was investigated for any surface flaws, such as the absence of formation crystals on the surfaces or any microbial or mould contamination[27].

- **Breaking point :-**

The strength of Lipbalm was assessed using the breaking point method. The lip balm was positioned inch from the edge of the support and held horizontally in a socket. The weight was increased progressively by a predetermined amount (10 gm) at predetermined intervals of 30 seconds, and the weight at which it broke was regarded as the breaking point. [28]

3. Results :-

Table No.2 Evaluation Parameters And Results

Sr. No.	Evaluation parameter	Observed value
1.	Melting Point	63°C - 65°C
2.	Organoleptic properties	-
2.1	Colour	White
2.2	Odour	Pleasant
2.3	Appearance	Smooth
3	Test of spread ability	-
4	pH measurement	6.0
5	Skin irritation	No
6	Breaking point	29 gm[29]

4. Conclusion :-

The cosmetics sector is thriving as a result of the enormous demand for beauty-enhancing products. The current state of natural lip balm products has been examined in this investigation. This study offers recommendations for using herbal substances to make lipsticks with little to no negative effects. The stability of the formulation was the same in both refrigerator and room temperature storage. It was noted that the spreadability was consistent and the organoleptic qualities were stable. During the Normal Stability Test, the formulations kept at room temperature and in a refrigerator behaved similarly. Each lip balm's physicochemical characteristics were examined. It was determined that lip balm created from natural materials is safe to use and that this particular combination works best when creating lip balm. The formulation will remain steady, according to the results of the recent research.

Reference:-

1. kamlesh D. Mali , Nafisa Jhh Ranwala , Hitesh S. Raotole , kajal P. Rathod , Aboli A. Shukla. Formulation and Evaluation of Herbal Lip Rouge. International journal of pharmaceutical science Review and Research ; 55(1) ; 13-17
2. P.K. Chattopadhyay, Herbal cosmetics and ayurvedic Medicines, National institute of Industrial Research. 1 (2005) 45-50.
3. B.H. Ali, N.A. Wabel, G. Blunden, Phytochemical, Pharmacological and toxicological aspects of Hibiscus Sabdariffa L.: a review. Phytoter Res. 19 (2005) 369-375.
4. Alessandra Ribeiro Fernandes, Michelli Ferrera Dario, Claudinéia Aparecida Sales de Oliveira Pinto, Telma Mary Kaneko, André Rolim Baby, Maria Valéria Robles Velasco. Stability evaluation of organic Lip Balm. Brazilian Journal of Pharmaceutical Sciences Vol. 49, n. 2, apr./jun., 2013

5. M. Kadu, S. Vishwasrao and S. Singh, (2014) Review on Natural lip balm, International Journal of Research in Cosmetic Science. 5, 1-7.
6. V.P. Kapoor, Herbal cosmetics for skin and hair care, Natural Product Radiance. 4 (2005) 306-314.
7. GOUVEA, M.C.B.L.F. Desenvolvimento de base de batons. Cosmet. Toiletries (Portuguese edition), v.5, n.2, p.49-56, 1993.
8. BONADEO, I. Cosmetica ciencia y tecnología. Madrid: Ciencia SA, 1982. P.347-356.
9. CUNNINGHAM, J. Color cosmetics. In: WILLIAMS, D.F. Chemistry and technology of the cosmetics and toiletries Industry. London: Chapman and Hall, 1996. Cap.4, p.149-158.
10. M.S. Balsam, E. Sagarin, Cosmetics science and Technology, Second ed. Wiley Interscience Publication, NY, USA, 2008, 3, pp. 209-512.
11. M.G. Denavarre, The chemistry and manufacture of Cosmetics, Second ed., Continental Press: Orlando, USA, 1975, 3, pp. 699.
12. Manso, James (16 February 2021). "Burt's Bees Releases Sustainability Impact, Goals Report". *WWD*. p. 17.
13. A.R. Fernandes, M.F. Dario, C.A.S.O. Pinto, T.M. Kaneko, A.R. Baby, M.V.R. Velasco, Stability Evaluation of organic Lip Balm, Braz. J. Pharm. Sci. 2 (2013) 49.
14. S. Deshmukh, M. Chavan, M. Sutar, S. Singh, Preparation and evaluation of natural lipsticks from bixa Orellana seeds, Int J Pharm Bio Sci. 4 (2013) 139-144.
15. R.G. Harry, J.B. Wilkinson, Harry's Cosmeticology, six Ed. Leonard Hill books and Intertext publisher, London, 1973.
16. P.P. Sharma, Cosmetics- Formulation, manufacturing and quality control, fourth ed. Vandana Publications Pvt. Ltd., India, 2008.
17. B.M. Mittal, R.N. Saha, A Handbook of cosmetics, first ed., Vallabh Prakashan: New Delhi, India, 2000.
18. M.A. Mundo, O.I. Padilla-Zakour, R.W. Worobo, Growth inhibition of foodborne pathogens and food spoilage organisms by select raw honeys, International Journal of Food Microbiology, 97 (2004) 1-8.
19. S.A. Sahar, M. Soltan, M.E.M. Shehata, The effects of using color foods of children on immunity properties and liver, kidney on rats, Food and Nutrition Sciences. 3 (2012) 897-904.
20. A. M. Marina, Y. B. Che Man and I. Amin, Trends Food Sci. Technol. 20(10), 481-487 (2009).
21. BRASIL. Ministério da Saúde. Agência Nacional de Vigilância Sanitária. Séries Temáticas: Qualidade 1. Guia de Estabilidade de produtos cosméticos. Brasília, v.1, 2004.
22. S. N. H. M. Azmin, N. I. M. Jaïne and M. S. M. Nor, Cogent Eng. 7:1 (2020).
23. P.A.G. Wanyama, B.T. Kiremire, J.E.S. Murumu, (2014) Extraction, characterization and application of natural Dyes from selected plants in Uganda for dyeing of Cotton fabrics 185-195.
24. H. I. N. Nasution, "Formulation of Lip Balm using Combination of Palm Kernel Oil (PKO) and Red Palm Oil (RPO) as Lip Moisturizer," Final project, Universitas Sumatera Utara, 2018.

25. OLIVEIRA, F.O. Contribuição da análise térmica no desenvolvimento de formulações de batons. São Paulo, 2003. 85 p. [Dissertation of Master degree. Institute of Chemistry. University of São Paulo].
26. Deshmukh S, Chavan M, Sutra M, Singh S. Preparation And evaluation of natural lipsticks from Bixa orellana Seeds. International Journal of Pharma and Bio Sciences. 4(3), 2013, 139-144.
27. Mishra P and Dwivedi S. Formulation and evaluation Of lipstick containing herbal ingredients. Asian Journal Of Medical and Pharmaceutical Researches. 2(3), 2012, 58-60.
28. Pawar H, Karde M ,Mundle N,Jadhav P and Mehra K .Phytochemical Evaluation and Curcumin Content Determination of Turmeric Rhizomes Collected From Bhandara District of Maharashtra (India). Medicinal Chemistry, 4(8), 2014, 588-591
29. Sharma PP, cosmetics- Formulation, manufacturing and quality control, Edn 5. Vandana Publications, Delhi, 2008, 297-313.