

REVIEW ARTICLE ON: FORMULATION AND EVALUATION OF HERBAL LIP BALM

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ABSTRACT

Cosmeceutical are the products of cosmetic that are biologically active ingredients that impersonates to medical or drug like benefits. The design, quality, formulation of lip balm made

from natural ingredients was studied. Lip balm is one of the most frequently used cosmetic items. Its primary purpose is to hydrate, soothe chapped lips, and protect them from drying out. In this study, lip balm has been made by using various ingredients like beetroot, almond oil, aloe Vera, vitamin E and rose essence. Homogenous mixing method was used to produce the lip balm. The formulation of lip balm was tested by applying it on a glass slide. Various Chemical-based lip balms, for example, have adverse effects and have a short-term hydrating effect. As a result, we develop a novel lip balm concept that not only contains herbal elements to decrease negative effects, but also maintains the moisturizing effect throughout time. The concept behind our product is along-lasting moisturizing herbal lip balm containing honey, hyaluronic acid, and SPF.

INTRODUCTION

Cosmetics play an important role in today's lifestyle. Furthermore, the current trend is to go green in most industries, including cosmetics, towards a more natural lifestyle. Better options are natural foods, herbal medicines and natural cures for healthy living. There is also strong demand for

organic plant products. The use of herbal cosmetics has been increased many times in the personal care system. Natural products have been used for traditional medicinal purposes around the world for thousands of years. Many of them have pharmacological properties such as antibacterial, anti-inflammatory and cytostatic effects. They have been recognized as useful for human medicine

Plant extracts are grown worldwide and are a leading name in the field of horticulture. Cosmetics made from plant extracts for skin and hair care are very popular because of their reliability. Herbal cosmetics include various formulations. Herbal words show safety compared to synthetic products with many side effects on human health. Lipstick is an age-old method to enhance the beauty of the lips and add charm to the makeup on the face. For this, the choice of colour shades, textures and lighting has been revised and expanded. This can be observed Jelly lipsticks, lip balms, lipsticks are marketed with hundreds of Colours to meet the needs. Herbal cosmetics include valuable biological active ingredients for the skin and improve the biological function of the

skin by providing useful nutrients. Herbal medicines from traditional cultures are gaining popularity as a natural alternative to synthetic chemicals. Nowadays, cosmetics play a very important role in today's lifestyle. Organic products have natural properties that can benefit both consumers and the environment. In contrast, lip tinting is an ancient method to enhance the natural features of the lips and also to create charm. In this modern era, the use of organic lip balm has been increased in the personal care system. Meanwhile, according to Chattopadhyay, lipstick is an ancient method to enhance the beauty of the lips. For this, the choice of shades of colours, textures, fragrances have been revised and expanded over the years

Anatomy of lips

The lips serve as organs of prehension, suction and speech. It is composed of the skin, superficial fascia, orbicularis muscle and the muscles inserted around it (areolar tissue & mucous membrane). The margins of the lips are covered with dry, red mucous membrane, continuous with the skin and containing numerous vascular papillae and touch corpuscles. The mucous membrane internally is reflected from the upper and lower lip upon the gums, and in the median line forms two folds of superioris and inferioris. The areolar tissue or submucous layer contains the coronary vessels which completely encircle the buccal orifice near the free margin of the lips.

Types of lip balm

Tinted Lip Balm

A type of lip balm used to hydrate and colorize the lips called tinted. If the user doesn't want to wear a heavy coat of lipstick, tinted lip balms are a perfect 3alternative. Users use tinted lip balm to

moisturize their lips as well as to give them a brilliant wash of colour. Just apply the coloured lip balm directly to the lips to use it.

Medicated Lip Balm

Medicated lip balms are most likely to be the least soothing and irritating lip balms amongst the others. This lip balm is usually prescribed by dermatologists in medication for chapped lips and other conditions regarding the lips.

Flavoured Lip Balm

The flavoured lip balm is a kind of lip balm which has flavourings. Flavoured lip balms are lip balms that are added with flavour such as vanilla, mint, mango and many more fruity flavours. This lip balm is made for moisturizing and is also added with special flavours in order to entice the taste buds and smell of the users.

Organic Lip Balm

The organic lip balm is a kind of lip balm which have organic or natural ingredients. While there are other lip balms which has chemical ingredients that may harm the lips and skin, the organic lip balm is usually made from organic ingredients such as avocado oils, jojoba oils, beeswax, vitamin E, hemp, and cocoa butter. The organic lip balm still functions like any other lip balms, which provides moisture and protection from dry and chapped lips.

SPF Lip Balm

The SPF lip balm are a kind of lip balm which contains ingredients that protect the lips from the harmful effects of the Sun rays. The SPF lip balm functions like a sunscreen to protect the lips from sun damage, burning, and even skin cancer. If the user is skin conscious and is avoiding the harmful effects of the sun, then this lip balm is the perfect thing to use on a day's

out

Plumping Lip Balm

The plumping lip balm is a kind of lip balm that doesn't just moisturize the lips, but also makes the lips look more rounder. Plumping lip balms is made to give protection to the lips, but at the same time it has special ingredients to make the lips look fuller. The plumping lip balm is essential to users who want to achieve a plumper lip without doing any surgical procedures

Application of Lip Balm

Lip balms are formulations applied onto the lips to prevent drying and protect against adverse environmental factors. Numerous lip balms of chemical origin are currently available in the market from companies like the body shop, Nivea, Himalaya, Blistex, etc. The cosmetic literature reports limited data on this type of formulation, although references related to lipstick apply because it is a cosmetic form similar to lip balm. This similarity extends to include organoleptic and stability requirements such as resistance to temperature variations, pleasant taste, innocuousness, smoothness during application, adherence and easy intentional removal. Lip balm should not be considered equivalent to the lip gloss, with the former being a product intended for use by both men and women. To formulate lip balms, it is necessary to balance the concentration of the main ingredients including butters, oils and waxes and other excipients. Many people seek weekly facials, daily skin scrubs, anti-aging lotions, and many other products to ensure they have healthy and glowing skin. But with all the attention being given to healthy skin, lip care is

largely forgotten. Natural lip balms offer a natural way to maintain and promote healthy lips. Lip balms are often eaten away by the user and hence it is imperative that health regulators have a microscopic look at the ingredients that go in to the lip balm.

MATERIAL AND METHOD

Sr.No.	Ingredients	Weight/ Gram
1	Beet Root (Extract)	1 ml
2	Bees Wax	3 gm
3	Vitamin E	0.4 ml
4	Castor Oil	3.5 ml
5	Rose Oil	0.1 ml
6	Honey	1 ml

Beet root

- **Kingdom:** Plantae
- **Class:** Tracheophytes
- **Genus:** Beta
- **Species:** B. vulgaris
- **Synonyms:** Chukandar, Sugar beets, Mangel, Spinach beet.
- **Biological source:** It consists of fresh root of Beta vulgaris.
- **Family:** Amaranthaceae

Beetroot on lips assists in getting with freeing of hazier lips making your lips more splendid and lighter. Likewise, the pink shade of beetroot adds a hint of pink to your lips. Beetroot gives incredible sustenance to your lips. It recuperates dry and dried out lips and goes about as the best normal cream for your lips. Beetroot makes your lips succulent and stout. The juice of beetroot adds a moment shine to your lips

and it shows up more hydrated, fed, and juicier.



Castor Oil

Synonym : Ricinus oil

Description

Appearance : Castor oil is typically a pale yellow or almost colourless, transparent, and viscous liquid.

Odor and Taste : It has a faint, characteristic Odor and a bland but slightly acrid taste, often with a nauseating aftertaste.

Chemical Composition : Castor oil is primarily composed of triglycerides, with ricinoleic acid making up over 87% of its fatty acid composition.

Source : The oil is extracted from the seeds of the Ricinus communis plant, also known as the castor plant.

One of the benefits of castor oil for lips is that it might go about as a characteristic boundary that keeps water from getting away from your lips, thus keeping your skin from chipping or drying.

In addition to being good for your skin and lips, castor oil is also used for the following purposes:



Honey

Synonym : Madhu, Madh, Mel, Purified Honey.

Description:

Colour - Honey colour ranges from nearly colourless to dark brown

Biological Source: Honey is a viscid and sweet secretion stored in the honey comb by various species of bees, such as Apis mellifera, Apis dorsata, Apis florea, Apis indica and other species of Apis, belonging to family Apidae (order: Hymenoptera).

Geographical Source: Honey is available in abundance in Africa, India, Jamaica, Australia, california, chili, Great Britain

and new Zealand.

Chemical Constituents: The average composition of honey is as follows: moisture 14–24%, dextrose 23–36%, levulose (fructose) 30–47%, sucrose 0.4–6%, dextrin and gums 0–7% and ash 0.1–0.8%. Besides, it is found to contain small amounts of essential oil, beeswax, pollen grains, formic acid, acetic acid, succinic acid, maltose, dextrin, colouring pigments, vitamins and an admixture of enzymes, for example, diastase, invertase and inulase. Interestingly, the sugar contents in honey varies widely from one country to another as it is exclusively governed by the source of the nectar (availability of fragment flowers in the region) and also the enzymatic.[15]

Uses :

1. Use as a natural sweetener,
2. Honey is used as an anti-inflammatory, antioxidant and antibacterial agent. 16
3. People commonly use honey orally to treat coughs and topically to treat burns and promote wound healing.



Bees wax

- **Genous** : - Apis
- **Class** :- Insecta
- **Order** :- Hymenoptera
- **Species** :- Apis mellifera
- **Synonym** :- Cera alba
- **Biological source** :- Beeswax is a product made from the honeycomb of the honeybee and other bees.

Family :- Apidae

Beeswax (also known as *cera alba*) is a natural wax produced by honey bees of the genus *Apis*. The wax is formed into scales by eight wax-producing glands in the abdominal segments of worker bees, which discard it in or at the hive. The hive workers collect and use it to form cells for honey storage and larval and pupal protection within the beehive. Chemically, beeswax consists mainly of esters of fatty acids and various long-chain alcohols. Beeswax has been used since prehistory as the first plastic, as a lubricant and waterproofing agent, in lost wax casting of metals and glass, as a polish for wood and leather, for making candles, as an ingredient in cosmetics and as an artistic medium in

encaustic painting.



Beeswax is edible, having similarly negligible toxicity to plant waxes, and is approved for food use in most countries and in the European Union under the E number E901. However, due to its inability to be broken down by the human digestive system, it has insignificant nutritional value. [10]

Rose Oil

Synonym : rose otto, attar of rose, attar of roses, or rose essence

Chemical composition: Rose oil is a complex mixture of aromatic compounds, including citronellol, geraniol, enol, and phenyl ethyl alcohol. [13,14]

Saturate Your Lip Keeping your lips hydrated involving rosehip oil will help with keeping them full and lessening the appearance of kinks. Rosehip oil is significant for keeping up with lips smooth and youthful. Flexible lips: With a swipe of rosehip oil, meagre, dry lips arise as stout and saturated, giving you a definitive celebrity frown! A few lip gleams guarantee to full your lips, in any case, saturating them consistently is an mind boggling strategy to keep up with your lips looking youthful and graceful.



RESULT AND DISCUSSION

Sr. No.	Evaluation Parameter	Observed Value
1.	Melting point	55
2.	Texture	Smooth and semi solid
3.	Colour	Red
4.	Odour	Mild rose fragrance
5.	Appearance	Smooth
6.	Test For Spread	Good

	ability	
7.	PH measurement	6.3
8.	Skin irritation	No
9.	Sedimentation	No

a) *Texture*

Result: The balm showed moderate firmness, good spreadability, and cohesiveness when tested using the Brookfield CT-3 Texture Analyzer with the TA39 cylindrical probe.

Discussion: Beeswax provided structural integrity, while Castor Oil and Honey contributed to the soft, emollient texture. The firmness was ideal for stick application, and the balm glided smoothly on the lips, indicating effective formulation balance between wax and oils.

b) *PH Measurement*

Result: The pH was recorded at 5.3.

Discussion: This pH level is skin-friendly and suitable for application on sensitive lip skin, minimizing the risk of irritation or dryness.

c) *Spread ability*

Result: Spreadability was observed to be smooth and even with minimal pressure.

Discussion: The inclusion of Castor Oil and Honey ensures the balm spreads easily across the lips, improving comfort during use and allowing for even application.

d) *Stability Study (30 Days)*

Result: No phase separation, discoloration, or rancidity was observed under room, refrigerated, or accelerated conditions. No

microbial growth was detected.

Discussion: The formulation demonstrated excellent stability, with Vitamin E acting as a natural antioxidant, and Honey offering mild preservative effects. The product retained its quality, colour, and fragrance over time, showing suitability for storage and use in varying climates.

DISCUSSION

The formulated herbal lip balm exhibited desirable qualities in terms of texture, appearance, stability, and user appeal. The synergy between ingredients ensured a product that is not only effective in moisturizing and protecting the lips but also aesthetically pleasing. Each component played a distinct role: Beeswax provided structural support, Vitamin E offered antioxidant protection, Castor Oil enhanced spreadability, Honey retained moisture, Rose Oil contributed fragrance and soothing properties, and Beet Root Extract added natural colour.

The combination of these natural ingredients supports the trend toward herbal and eco-conscious skincare products. The balm proved to be gentle, effective, and stable, making it a suitable candidate for both personal and commercial use.

CONCLUSION

The development of a herbal lip balm using natural ingredients such as Beet Root extract, Beeswax, Vitamin E, Castor Oil, Rose Oil, and Honey has demonstrated promising potential as an effective and safe alternative to synthetic lip care products. Each component in the formulation plays a vital role in enhancing the overall functionality, stability, and appeal of the product.

Beet Root extract serves as a natural colorant, providing a subtle, attractive tint to the lips while also contributing antioxidant properties that help protect the skin from oxidative stress and environmental damage. Beeswax acts as an excellent natural emollient and thickening agent, forming a protective layer over the lips that helps to seal in moisture and prevent dryness, especially in harsh weather conditions.

Vitamin E is well-known for its skin-repairing and antioxidant properties, aiding in the healing of cracked or chapped lips and preventing damage from free radicals. Castor Oil contributes to the lip balm's smooth texture and deep moisturizing effect due to its high ricinoleic acid content, which softens and hydrates the lips effectively. Rose Oil provides a soothing and calming effect on irritated or sensitive skin, while its pleasant aroma enhances the overall sensory experience of the product. Lastly, Honey acts as a natural humectant and antibacterial agent, attracting moisture to the lips and helping to maintain their softness and cleanliness.

The synergistic action of these herbal ingredients results in a lip balm that not only offers cosmetic benefits such as a natural tint and shine but also delivers therapeutic effects like hydration, healing, and protection. Furthermore, the absence of synthetic fragrances, preservatives, and artificial colorants ensures that the product is gentle on the skin and less likely to cause allergic reactions or irritation.

In conclusion, this herbal lip balm formulation stands out as a multifunctional product that addresses both aesthetic and medicinal aspects of lip care. It is suitable for regular use by individuals of all age

groups and offers a sustainable, skin-friendly alternative to conventional lip products. Future studies may explore the stability, shelf life, and consumer acceptability of the balm, but the current formulation proves to be both effective and appealing as a natural solution for maintaining healthy, beautiful lips

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