JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

HERBAL LIP BALM: FOR THE TREATMENT OF SMOKING-CAUSED BURNING, CRACKING, AND LIGHTEN LIPS

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Abstract *:* Because they lack oil glands and are constantly exposed to external stressors, lips are extremely sensitive and vulnerable to dryness, cracking, and discoloration. The primary objective of this study is to develop and evaluate a herbal lip balm designed to treat burns, heal fissures, and reduce smoking-related lip coloring. Natural components like beeswax, castor oil, sesame oil, rose oil, vitamin E, honey, and beetroot extract are used in the composition; each is chosen for its special medicinal qualities.

Beeswax is a natural moisturizer and emulsifier; castor oil lubricates; sesame and rose oils have calming and antioxidant properties; vitamin E is a natural conditioner; honey is a humectant and antibacterial; and beetroot adds natural color and helps lighten dark lips. Castor oil lubricates, sesame and rose oils provide relaxing and antioxidant qualities, vitamin E is a natural conditioner, honey is a humectant and antimicrobial, beetroot gives natural color and helps lighten dark lips, and beeswax is a natural moisturizer and emulsifier.

The outcomes show that the herbal lip balm's formulation efficiently hydrates, protects, and restores the lips while providing a natural method of healing and depigmentation without the use of artificial chemicals. Therefore, this product offers a therapeutic, safe, and environmentally friendly alternative for lip care, especially for people who have burns, dryness, or smoker's pigmentation.

Index Terms - lips, dryness, cracking, discoloration, herbal lip balm

I.INTRODUCTION :

A lip balm is a wax-like material that hydrates and moisturizes our lips. It shields our lips from A substance that resembles wax that hydrates and moisturizes our lips is called a lip balm. It shields our lips from chilly temperatures and dry, moisture-depleting air. Lip skin is thin and devoid of oil glands. It increases the risk of dry lips. Dryness first manifests itself on our lips. Products like petroleum jelly and lip balms treat dry, chapped lips and stop them from drying out. Beeswax, camphor, paraffin, acetyl alcohol, and other pigments, aromas, and flavors are typically found in lip balms. But over time, skincare companies have come to understand how important it is to make skincare products with natural ingredients. They have launched lip care products free of dangerous substances like parabens and sulphates. Additionally, lip care products are now cruelty-free, hygienic, and good to the environment[1].

The public's desire for herbal cosmetic formulations is growing. In order to formulate using organic raw materials, new technologies and strategies have been put into place. These organic-certified raw materials and products come from the methodical cultivation and maintenance of the ingredients used to make lip balm. These ingredients are preferred to be free of hazardous chemical pesticides or manures, and they are stored using natural methods rather than modern ones under suitable conditions. Particularly in severe weather, the lips become dry, chapped, and cracked[2].

This study's goal is to create a lip balm that will brighten smokers' dark lips and treat burns and cracks. By thoroughly hydrating the outer skin cells of the lips, a moisturizing lip balm helps prevent dry and chapped lips[3]. As a result, honey was chosen as a moisturizing agent together with beeswax, sesame oil, rose oil, and vitamin E. Honey can be added to lip balm formulations because of its antibacterial, antifungal, and natural oxidant qualities. The durability of natural lip balm has been the subject of numerous investigations.

II. ANATOMY OF LIP :

The lips, which are made up of superficial fascia, orbicularis muscle, epidermis, and surrounding muscles, are involved in sp eaking, suction, and cognition. The lips are covered by a crimson, dry mucous membrane that is continuous with the skin and rich in touch corpuscles and vascular papillae. This membrane forms folds along the midline as it reaches onto the gums. The buccal orifice is surrounded by coronary vessels in the underlying areolar tissue, also known as the sub-mucous layer. The region is supplied by the superior coronary artery, which is bigger than the inferior and, when compressed, can assist prevent nasal hemorrhage.

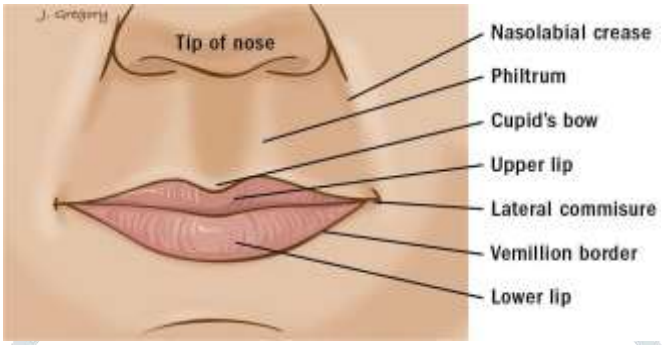

Fig. 1: Anatomy of lips.

The coronary vein, also known as the superior labial vein, emerges from a plexus in the orbicular muscle of the top lip, travels parallel to the coronary artery, and empties into the facial vein below the alae of the nose. The major branch from the lower lip normally descends to the submental vein before entering the facial vein or the anterior jugular vein, whereas the inferior coronary vein empties into the facial vein beneath the superior labial vein. Nerves from the mental nerve, which leaves the bone through the mental foramen, supply the lower lip. While some lymphatic veins from the lips empty into the sub maxillary glands, others empty into a gland above the hyoid bone. Mucous is produced by labial glands located in the submucous layer of the lips. Mucous retention cysts can develop when the ducts of the labial glands, which create mucous fluid in the submucous layer of the lips, are obstructed[2].

III. LIP BALM :

A variety of lip balms are categorized in literature based on their ingredients, such as moisturizing, UV (ultraviolet) filtering, healing, colored, and nourishing lip balms. A good and healthy approach to take care of your lips is to use a herbal lip balm to feed them and shield them from the weather.

Additionally, lip balms are divided into other categories, such as natural ingredients. Essential oils, plant extracts, and herbs are used to make herbal lip balm. These components are frequently non-toxic, organic, and devoid of artificial flavors, colors, and preservatives. Calming and Nourishing: Herbs are used in herbal lip balm to relieve and restore dry, chapped lips. For instance, a barrier made of shea butter, beeswax, and cocoa butter keeps moisture in and shields the lips from additional harm. Beeswax, a naturally occurring material that bees secrete, is widely used in cosmetics, especially lip balms. This material has a nice scent, is highly hydrating, and protects lips from the sun's damaging rays. A natural emulsifier is beeswax.

Nourishment: Coconut oil, jojoba oil, and vitamin E oil are examples of nourishing components found in herbal lip balms that replenish moisture and vital nutrients for healthy lips. In addition to protecting against damaging UV rays and relieving colds and virus infections, these balms also have a relaxing scent thanks to the essential oils they contain. It's crucial to understand the difference between lipstick and lip balm because lipsticks are used to tint lips, while lip balms are mostly used to prevent dryness. In order to obtain the ideal melting temperature of 65–75ºC for the finished product, lip balms must carefully balance important constituents such butters, waxes, and oils.

Without creating friction or dryness, the lip balm shields lip membranes from external elements like pollution, UV rays, and dryness. Its preparation calls for a precise concentration of different chemicals, each of which has a specific function. Zinc oxide for sun protection, titanium dioxide for fogging, lemon oil for antiseptic and antioxidant qualities, white petroleum jelly as an oil-based base, glycerol for stabilization, oleic acid for texture, artificial sweeteners like saccharin and aspartame for flavor, and beeswax as an additional oil-based base are important ingredient[3].

IV. Lips Related Problems :

Lips are susceptible to many ailments or issues. These are a few typical issues with lips.

1. Dry lips: When lips get dry, they lose moisture and become parched. This can be caused by environmental factors including dry air, low temperatures, or excessive lip-licking. Dry lips may feel tight, peeling, or cracking.
2. Chapped lips: Chapped lips can occasionally bleed, hurt, and feel uncomfortable. A more severe type of dryness is represented by chapped lips. Chapped lips can be caused by the weather, wind, sun, and prolonged dryness.
3. Cold sores: Small, irritating, fluid-filled blisters that form on or near the lips are known as blisters of fever and cold sores. They are highly contagious and are brought on by the virus that causes herpes simplex.
4. Inflammation and cheilitis: Mouth corner cracking and an inflammatory reaction are signs of angular cheilitis. Long-term exposure to wetness, a lack of nutrition, or bacterial or yeast infections could all be the cause. Lip infections can be caused by viruses, bacteria, or fungi. Infection symptoms include swelling, redness, discomfort, and the development of blisters or pus-filled sores.
5. Allergies: Some people may have allergies to specific foods, cosmetics, or lip care items. An allergy can cause swelling, irritation, redness, or even blisters on the lips.
6. Lip discoloration: A variety of reasons, including smoking, sun exposure, certain medications, and underlying medical disorders, can cause your lips to change color. In this case, lips could appear darker.

V.Types of Lip Balms :

Lip balms have seven different varieties.

1. Tinted Lip Balm
2. Medicated Lip Balm
3. Flavoured Lip Balm
4. Organic Lip Balm
5. SPF Lip Balm
6. Plumping Lip Balm
7. CBD Or Hemp oil Lip Balm[4]

VI.INGREDIENTS :

Table of Ingredients

INFREDIENT	USES / ROLE
BEES WAX	Glossiness ,Hardness, Natural Emulsifier, Moisturizing Agent
CASTOR OIL	Lubricant
VITAMIN E	Antioxidant , Natural Conditioner
SESAME OIL	Antioxidant
ROSE OIL	Moisturizing
HONEY	Humectant,
BEETROOT	Colouring Agent

Benefits Of Natural Lip Balm:

1. Natural lip balms support the preservation of the lips' inherent beauty and health.
2. Both sexes can use the natural lip balms.
3. Chapped, dry, or cold-sore-prone lips are protected by natural lip balm products.
4. Applying Herbal Lip Balm Cosmetic to Improve Skin and Face Appearance.
5. restores moisture to your lips.
6. To make your lips softer and less dry, refresh them overnight.

Applications of Lip Balm :

1. To prevent drying out and shield the lips from harmful environmental elements, herbal lip balms are applied.
2. The Body Shop, Baby Lip, Blistex, Himalaya, Nivea, and other brands already have a large number of chemical-based lip balms available.
3. Natural lip balm is suitable for men as well as women.
4. The concentration of the key components, which include butters, oils, waxes, and various other excipients, must be balanced when creating lip balms.
5. Health inspectors must scrutinize the balm's constituents at the microscopic level because consumers often eat away from lip balms.

VII. ROLE OF INGREDIENTS

1. BEES WAX

Fig 1 Beeswax

In addition to being incredibly moisturizing and fragrant, beeswax may protect lips from the sun's harmful rays. Beeswax is a natural emulsifier. Furthermore, research has shown that tiny levels of naturally occurring antimicrobial chemicals are present in beeswax. This is very useful for people who have extremely dry and cracked lips. These antibacterial agents can prevent the agonizing inflammation that follows an infection[5,6].

2. CASTOR OIL

Fig 2 castor oil

One benefit of using castor oil on your lips is that it may function as a natural barrier to keep water from escaping, keeping your skin from flaking or drying out.

3. VITAMIN E

Fig 3 Vitamin E

Vitamin E is a natural conditioner and an antioxidant. By reducing the indications of aging, vitamin E helps to preserve the lips' youthful, delicate feel. Dry, chapped lips can be relieved with topical vitamin E oil. Applying vitamin E to dry lips accelerates the appearance of new cells since it encourages cell turnover and regeneration. Similar irritation can also be avoided by vitamin E oil's thick, greasy viscosity[7,8].

4. SESAME OIL

Fig 4 Sesame oil

It is high in antioxidants: Research has shown that applying sesame oil topically can lessen cell damage by blocking specific substances that are known to generate free radicals that damage DNA.
It can hasten the healing of wounds, sunburns, cracks, and sores. In addition to accelerating healing, sesame oil's potent anti-inflammatory and antioxidant qualities have been shown to promote the formation of collagen at the wound site.

5. ROSE OIL

Fig 5 Rose oil

Moisturize Your Lip: Using rosehip oil to keep your lips hydrated can help to keep them full and reduce the appearance of wrinkles. Rosehip oil is essential for keeping lips youthful and smooth.
Flexible lips: With a swipe of rosehip oil, thin, dry lips emerge as plump and moisturized, giving you the ultimate movie star pout! Several lip glosses claim to plump your lips, however, moisturizing them every day is an incredible method to maintain your lips looking young and supple.

6. HONEY

Fig 6 Honey

As a natural humectant, honey attracts and retains moisture, keeping your lips hydrated throughout the day. The anti-inflammatory properties of honey may also aid in the relief of chapped lips. In the case that the lips crack, honey's antimicrobial properties can assist prevent infection.

7. BEETROOT

Fig 7 Beetroot

Applying beetroot to your lips helps lighten and brighten them by removing darker areas. Additionally, beetroot's pink hue gives your lips a hint of pink. Your lips are greatly nourished by beetroot. It is the best natural moisturizer for your lips and relieves dry, chapped lips. Your lips become full and juicy when you eat beetroot. Beetroot juice instantly makes your lips look more moisturized, nourished, and juicy.

VIII. METHODOLOGY :

PROCEDURE:

1. Weigh each component precisely.
2. Melt the beeswax in a water bath in a clean evaporating dish, keeping the temperature between 50 and 64 degrees Celsius.
3. Next, add the sesame oil, castor oil, and beetroot powder, respectively. Stir well and mark it as A.
4. Next, combine honey and vitamin E (pour the contents of the capsule into the honey) in another evaporating porcelain dish, properly mix, and mark as B.
5. After making sure both dishes are at the same temperature, Swirl vigorously as you pour the contents of porcelain Dish B, drop by drop, into Dish A.
6. Finally, add rose oil to the formulation and transfer the liquid lip balm into a clean, wide-mouth container. Keep the lip balm at room temperature to allow it to cool[2].

IX. EVALUATION OF LIP BALM :

1. Melting point

To find the lip balm sample's melting point, it was put in a glass capillary with one end sealed with a flame. The drug-containing capillaries were immersed in liquid paraffin in the melting point equipment, which contained a magnetic stirring feature. Melting was evaluated visually and the melting point was recorded[9].

2. Organoleptic properties

The lip balm's organoleptic properties, including its color, taste, odor, and appearance, were examined[10].

3. Test of spreadability

The product was repeatedly applied (at room temperature) onto a glass slide in order to visually evaluate the homogeneity in the formation of the protective layer and whether the stick broke, twisted, or fragmented during application[11].
G: Good: the lip balm is applied consistently, flawlessly, and without fragmentation or deformation.
I-Intermediate: consistent, minimal fragmentation, suitable application, and little lip balm deformities
B: The lip balm is applied improperly, is highly deformed, uneven, and leaves many bits behind.

4. Measurement of pH

The pH of the lip balm was evaluated to look for any negative effects. To find the pH, one gram of the substance was dissolved in one hundred milliliters of water. The pH was measured using a pH meter. The pH of the lip is nearly neutral[12].

5. Stability studies

The developed lip balm has been kept for 30 days at room temperature (25.0–3.00C) and then chilled (4–2.00C) for accelerated stability testing. After 30 days, it was evaluated again for pH, melting point, spreadability, and organoleptic properties[13].

X. FUTURE SCOPE:

1. In order to improve healing, moisturizing, and lip-lightening effects, the herbal lip balm's future scope will concentrate on improving its formulation employing cutting-edge natural ingredients.
2. To improve the absorption of herbal active ingredients, more research can examine nano-based delivery methods.
3. Its safety and effectiveness for long-term use can be confirmed by dermatological research and clinical trials.
4. The solution can be expanded to address different lip issues brought on by lifestyle factors or environmental damage.
5. Packaging that is eco-friendly and sustainable can be used to attract conscientious customers.
6. All things considered, the creation of this herbal lip balm has enormous potential in the medical and cosmetic markets.

XI. CONCLUSION :

Using natural materials like beeswax, castor oil, sesame oil, rose oil, vitamin E, honey, and beetroot extract, the current study effectively created and assessed a herbal lip balm. Together, these distinctive therapeutic qualities—moisturizing, healing, antioxidant, antibacterial, and depigmenting effects—improved lip protection and restoration. Desired physicochemical characteristics, such as a suitable melting point, smooth spreadability, stable pH, and appealing color and scent, were demonstrated by the formulated balm. The findings demonstrated that the herbal composition helps to diminish pigmentation brought on by smoking or exposure to the environment while also efficiently moisturizing, calming, and repairing dry, cracked, and burned lips. Additionally, it is a sustainable, safe, and eco-friendly substitute for commercial lip care products due to the lack of synthetic chemicals. As a result, this herbal lip balm presents a promising cosmetic and therapeutic option for naturally keeping healthy lips. To increase its efficacy and economic potential, future study may concentrate on large-scale production optimization, long-term stability tests, and clinical evaluation.

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