

**HERBAL LIP BALM WITH POMEGRANATE: A REVIEW THEIR  
COSMETIC AND THERAPEUTICAL EFFECT****Vitnor Rutuja\*<sup>1</sup> and Prof. Ashwini More<sup>2</sup>**<sup>1</sup>Student of Pratibhatai Pawar College of Pharmacy Wadala Mahadev, Shrirampur.<sup>2</sup>Assistant professor of Pratibhatai Pawar College of Pharmacy, Wadala Mahadev,  
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Shrirampur.**➤ ABSTRACT**

Lip balm, also known as lip salve, is a wax-like product applied to the lips to moisturize and prevent them from becoming dry or chapped. Most current lip balms on the market are made with synthetic chemicals, which can sometimes have negative side effects. However, herbal lip balms, made from natural ingredients like fruits (such as pomegranate), offer a healthier alternative. The main purpose of lip balm is to form a protective layer over the lips, locking in moisture and shielding them from the environment, such as wind and cold weather. Lip balm is not gender-specific anyone can use it. A natural herbal lip balm is made using plant-based oils, extracts, and colorants, which are generally safer and less likely to cause irritation. The idea behind these products is to provide long-lasting moisture and nourishment without the harmful effects that some synthetic ingredients might cause. By using natural ingredients, herbal lip balms help keep the lips soft and hydrated, while minimizing the risk of side effects.

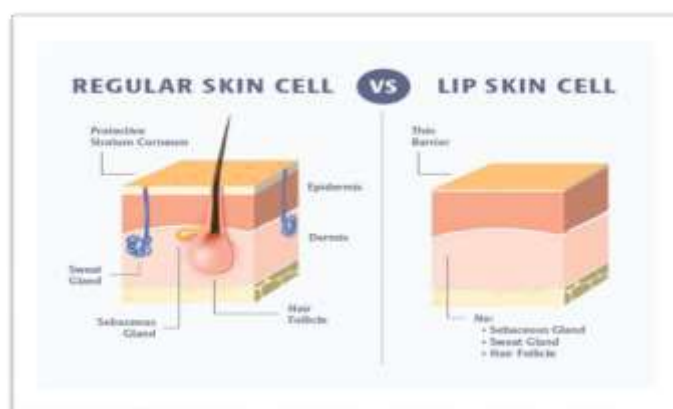
**KEYWORDS:** Pomegranate, herbal lip balm, natural ingredient, moisturizer.**➤ INTRODUCTION**

Cosmetics play a significant role in today's lifestyle, and there is a growing trend toward natural products. More industries, including cosmetics, are embracing eco-friendly and organic alternatives. This shift is part of a broader move toward healthier living, which includes using natural foods, herbal remedies, and holistic healing methods. With the increasing demand for organic products, especially from plants, herbal cosmetics have

become popular worldwide due to their quality and reliability.<sup>[1]</sup> The term "cosmetics" comes from the Greek word "kosmetikós," meaning "having the power or skill to decorate".<sup>[2]</sup>

Herbal extracts, often used in skin and hair care, are particularly valued because they are seen as safer than synthetic chemicals, which can have adverse effects on health. Herbal cosmetics, which include a variety of products, are considered more reliable and gentler, promoting the idea of safety and natural care. One example of a widely used cosmetic product is lip balm.<sup>[3-7]</sup> Colouring and moisturizing the lips is an ancient practice to enhance beauty and add glamour to the face. The market for lip products, including lip balms, lipsticks, and lip jellies, has expanded to cater to a variety of preferences in shades, textures, and finishes.<sup>[8]</sup> Natural lip balms are designed to prevent lips from drying out and protect them from environmental factors like cold weather and dry air.<sup>[9]</sup> They are made from plant-based ingredients and are generally safer than synthetic options.<sup>[10]</sup> When evaluating these products, factors like colour, scent, texture, pH, melting point, and skin irritation are important. Natural lip balms also tend to have fewer toxic chemicals compared to those that use artificial colours or fragrances, making them a better option for health-conscious consumers.<sup>[11]</sup>

The skin on the lips is quite different from the rest of the skin on our face. The top layer of skin on the lips is much thinner, with only 3 to 4 layers of cells compared to the 15-16 layers on other parts of the skin. This makes lips more sensitive and prone to dryness. Additionally, the lips contain fewer melanin cells, which is why the blood vessels underneath give the lips their pinkish colour. Unlike the rest of the skin, the lips don't have sweat glands or hair follicles, so they lack the natural protection that sweat and body oils provide. This makes lip care especially important to keep the lips hydrated and healthy.<sup>[12]</sup>



**Fig. 1: Difference between Lip and regular skin structure.**

### ➤ **Anatomy of lips**

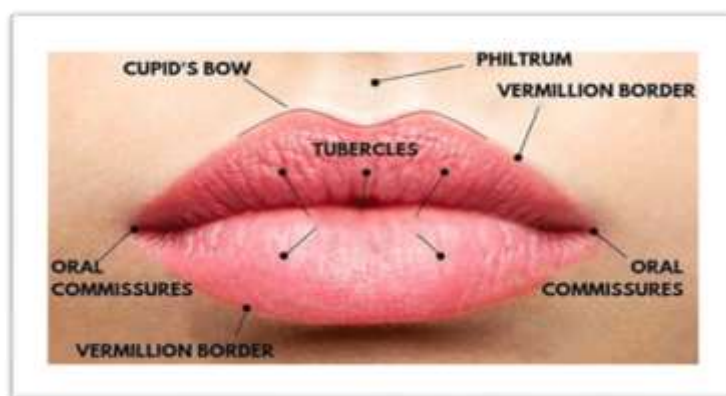
The anatomy of the lips is made up of several important structures that influence both how the lips function and how they look. Here's a breakdown of the key parts:

- **Skin**

Like the rest of your body, the outer layer of your lips is skin. However, lip skin is thinner and more delicate than the skin elsewhere on your body.

- **Vermillion border**

This is the visible line that separates the reddish part of your lips (the vermilion zone) from the surrounding skin. It's the sharp, defined outline of your lips.



**Fig. 2: Anatomy of lips.**

- **Vermillion Zone**

This is the red or pink area of your lips. It appears red because it has more blood vessels than the skin around it, making it more noticeable.

- **Philtrum**

This is the vertical groove that runs down the middle of your upper lip. It's the indentation between the nose and the upper lip.

- **Cupid's Bow**

The central, V-shaped part of your upper lip. It's often associated with a well-defined "bow" shape.

- **Oral Mucosa**

The inside surface of your lips is covered by a moist layer called the oral mucosa, which helps keep your lips hydrated. This is different from the outer skin, which is drier.

- **Labial Glands**

Tiny glands in the lips produce saliva to keep them moisturized, helping with functions like speaking and eating.

- **Orbicularis Oris Muscle**

This is a circular muscle that surrounds your mouth. It's responsible for actions like smiling, puckering, and closing the lips.

- **Nerve Endings**

Your lips are packed with nerve endings, making them extremely sensitive to touch, temperature, and pain.

- **Blood Vessels**

The blood vessels in your lips give them their colour and also help with their sensitivity and function.

All of these components work together to help your lips perform essential functions like speaking, eating, and expressing emotions, while also contributing to their appearance. Understanding lip anatomy is important in fields like cosmetic surgery, lip enhancement, and medical treatments.<sup>[13-15]</sup>

➤ **Lips Disorder**

Here are some common lip disorders, explained in simpler terms:

- **Swelling**

Swelling of the lips can happen when you're allergic to something, like certain foods, drinks, medications, lipstick, or even airborne irritants. If you can figure out what's causing the swelling and avoid it, your lips usually return to normal. However, sometimes the cause remains unclear.<sup>[16]</sup>

- **Inflammation (Cheilitis)**

Inflammation of the lips, known as cheilitis, causes symptoms like red, irritated, cracked, and scaly lips, especially at the corners of the mouth. This condition may occur due to a lack of vitamin B2 (riboflavin) in the diet.

- **Allergic Contact Cheilitis**

This type of cheilitis is often caused by contact with personal hygiene products like toothpaste, mouthwash, or even lip balms that contain certain chemicals, antibacterial agents, essential oils, or preservatives.<sup>[12]</sup>

- **Sun Damage**

Overexposure to the sun can make the lips dry, hard, and damaged, especially the lower lip. Sun damage can show up as red speckles or a white, filmy appearance, which can increase the risk of skin cancer over time. Protecting your lips with sunscreen or wearing a wide-brimmed hat can help reduce this risk.

- **Discoloration**

Some people get freckles or dark spots (called melanin macules) around their lips, which are usually harmless and may last for years. However, if you notice multiple small, scattered brownish-black spots, it could be a sign of a rare condition called Peutz-Jeghers syndrome, which causes polyps in the stomach and intestines. Kawasaki disease, which affects young children, can also cause dry, cracked lips and redness inside the mouth.

- **Sores**

A sore or raised area on the lips with hard edges might be a sign of skin cancer. Other types of sores could be caused by infections like oral herpes (cold sores) or syphilis. Some conditions, like keratoacanthoma, can cause lip sores too, but their exact cause isn't well understood.<sup>[9]</sup>

Natural products have been used for folk medicine purposes throughout the world for thousands of years. Pomegranate (*Punica granatum L.*) contains following chemical constituents ellagic acid, ellagitannins, Punic aciflavonoids, anthocyanins, estrogenic flavonoids. The chemical ingredients provide immunity, charm and beauty to the lips.

Thus, it can be used in the lip's cosmetic preparation such as, lip jellies, lip balm and lipsticks colour.

➤ **Lip Balm**

Lip balm is often used as a moisturizer to prevent dryness and protect the lips from harsh weather conditions, like cold or wind. While it's a cosmetic product, its main function is to

provide hydration and a shield for the lips, which makes it somewhat similar to lipstick in terms of form and consistency. However, there's limited detailed information in cosmetic literature specifically about lip balm formulations.

Like lipstick, lip balm typically comes in a stick form, with similar properties like texture, temperature resistance, and a pleasant scent or flavour. It also needs to be safe for use on the skin, easy to apply, and should adhere well to the lips. Another key feature is that lip balm is designed for easy removal when needed. While lip balms and lip glosses may seem similar, they are not interchangeable. Lip balms are meant for moisturizing and protecting the lips, and can be used by both men and women. Lip gloss, on the other hand, is more about adding shine and is usually less focused on hydration.<sup>[17]</sup>



**Fig. 3:** Lip Balm.

### ❖ Type Of Lip Balm

Here are some types of lip balm:

#### 1) Tinted Lip Balm

Tinted lip balm is a combination of moisturizer and colour. It's a great option for people who want a subtle pop of colour without the full coverage of lipstick. It adds a light wash of colour while still moisturizing the lips.<sup>[18]</sup>

#### 2) Medicated Lip Balm

Medicated lip balms are typically used to treat specific lip issues, like chapped lips or irritation. These are often prescribed by dermatologists and contain ingredients to help soothe and heal damaged lips, though they may not feel as smooth or comforting as regular lip balms.

### 3) Organic Lip Balm

Organic lip balms are made from natural, plant-based ingredients like avocado oil, jojoba oil, beeswax, vitamin E, cocoa butter, and hemp. These balms are a good option for people who prefer to avoid chemicals or want a more environmentally friendly product. They provide the same moisture and protection but are made with gentler ingredients.

### 4) Flavoured Lip Balm

Flavoured lip balms are designed to moisturize the lips while also offering a pleasant taste or scent. These can come in a variety of Flavors, like vanilla, mint, mango, or fruity scents, making them a fun, sensory experience as well as practical.<sup>[15 &19]</sup>

### 5) Plumping Lip Balm

Plumping lip balms are formulated to make your lips appear fuller and more voluminous. These balms contain ingredients that temporarily swell the lips, giving them a plumper look without the need for injections or surgery. They also provide the usual moisturizing benefits.<sup>[13]</sup>

### 6) SPF Lip Balm

SPF lip balms are specially designed to protect the lips from sun damage, just like sunscreen protects your skin. They contain ingredients that shield the lips from harmful UV rays, which can cause sunburn, premature aging, and even skin cancer. SPF lip balms are a must-have for anyone spending time outdoors.<sup>[20-21]</sup>

### ❖ Characteristics of Herbal Lip Balm

- Resistance to temperature variation: Herbal lip balms are made to withstand changes in temperature without losing their texture or effectiveness.
- Adherence and easy removal: These balms stick well to the lips but can be easily wiped off or removed when needed.<sup>[12]</sup>
- Smooth and easy to apply: They glide smoothly on the lips, making them comfortable to use.
- Non-irritant and non-toxic: They are made from natural ingredients, which are generally safe and gentle, reducing the risk of irritation.



### ❖ Advantages of Herbal Lip Balm

- 1) Protects lip health and beauty: Herbal lip balms help maintain soft, smooth, and healthy lips by moisturizing and preventing dryness.
- 2) Sun protection: Some herbal lip balms contain ingredients that act as a sunblock, shielding your lips from harmful UV rays.
- 3) Suitable for everyone: Both men and women can use herbal lip balms, as they are not gender-specific.
- 4) Helps with lip conditions: These balms can protect lips affected by cold sores, chapping, or general dryness.
- 5) Comfortable on the skin: Herbal lip balms form a smooth layer over the lips without causing friction or dryness, providing protection against environmental factors like UV radiation and pollution.

### ❖ Disadvantages of Herbal Lip Balm

1. Low-quality ingredients: Not all herbal lip balms are created equal. Poor-quality ingredients can cause damage to the lips, leading to dryness or irritation rather than hydration.
2. Possible dependency: Overusing lip balm, especially if you're constantly reapplying, can sometimes lead to a dependency where your lips "feel" dry without it, creating a cycle of constant use.
3. Beauty-focused products: Some herbal lip balms prioritize aesthetics (like scent or colour) over the health of your lips. These products might damage the natural softness, colour, or glow of your lips in the long run.
4. Shorter-lasting effect: Homemade or natural lip balms may not stay on the lips as long as commercial versions, meaning you'll need to reapply them more often.<sup>[23-28]</sup>

### ➤ Herbal Ingredient

#### 1. Pomegranate

- **Synonyms:** *Punica granatum*
- **Family:** Lythraceae
- **Subfamily:** Punicoideae.<sup>[29]</sup>

The pomegranate, also known as *anar*, is a fruit-bearing shrub or small tree that grows up to 5 to 8 meters (16–26 feet) in height.<sup>[30]</sup> Native to regions like India, Iran, and Pakistan, it has



been cultivated for thousands of years, primarily for its medicinal and nutritional benefits. The pomegranate is one of the oldest fruits known to humans, and it continues to be a popular fruit globally due to its health-promoting properties.<sup>[31-32]</sup>

Many parts of the pomegranate plant such as the bark, leaves, fruit, and rind—are used for their therapeutic properties. Traditionally, it has been used to treat a variety of health issues, including:

- Ulcers
- Snakebites
- Liver damage (Hepatic issues)
- Digestive problems (e.g., diarrhea, dysentery)
- Worm infections (Helminthiasis)
- Acidosis and hemorrhage
- Respiratory disorders.<sup>[33-34]</sup>



**Fig. 4: Pomegranate.**

The seed oil of pomegranate has also been shown to have anti-inflammatory effects.<sup>[35]</sup> Additionally, pomegranate is known for its ability to hydrate the skin, lock in moisture, and prevent skin dryness.<sup>[36]</sup>

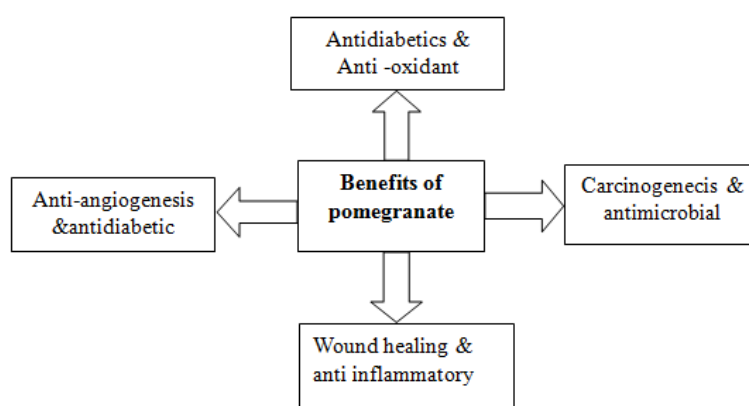
#### • Botanical Source

The pomegranate belongs to the Lythraceae family and includes only two main species: *Punica granatum* (the typical variety) and *Punica protopunica* (found mostly in the Arabian Peninsula). There is also a dwarf variety called *Punica granatum* var. *nana*, often grown as an ornamental plant in gardens due to its small size, pink flowers, and less sweet fruit.<sup>[37]</sup>

- **Chemical Constituents**

*P. granatum* contain chemical constituents like, ellagic acid, ellagitannins, Punic aciflavonoids, anthocyanins, estrogenic flavonoids and flavones.<sup>[38]</sup> The rind of the pomegranate is rich in beta-carotene, phosphorus, and calcium, while the seeds are packed with lipids and proteins. Fresh pomegranate juice contains about 85% water, 10.6% total sugars, and small amounts of ascorbic acid (vitamin C), pectin, and citric acid. The juice also contains important minerals such as potassium (49.2 ppm), although other minerals like iron and zinc are found in higher quantities in the seeds compared to the juice.<sup>[39]</sup>

- **Benefits of Pomegranate**



**Fig. 5: Benefits of pomegranate.**

- **Pomegranate Seed**



**Fig. 6: Pomegranate seed.**

### Uses

1. Pomegranate seed oil is known for its ability to deeply penetrate the skin and hydrate it at multiple layers.

2. This makes it especially effective for moisturizing dry, cracked skin, helping to restore softness and smoothness.<sup>[36]</sup>

## 2. Bees wax



**Fig. 7: Beeswax.**

**Synonyms:** Cera alba, Cera flava.

**Family:** Apidae

**Biological Source:** Beeswax is a natural wax produced by honeybees, specifically the *Apis mellifera* species, from their honeycombs.<sup>[12]</sup>

**Chemical Constituents:** Its primary components are carbon (73.3%), hydrogen (13.2%), and oxygen (7.5%).<sup>[22]</sup> The wax contains a substance called myricin, which is a compound known as melissyl palmitate. When processed, melissyl palmitate can break down into myricyl alcohol. Other important elements in beeswax include cerotic acid, melissic acid, and ceryl alcohol, along with some unsaturated fatty acids and hydrocarbons.<sup>[12]</sup>

### Uses

1. **Moisturizing:** Beeswax acts as a natural moisturizer, often used in products to prevent the lips from drying and cracking.
2. **Lip Care Products:** It's commonly found in lip balms, lip glosses, and other lip care items.
3. **Ointments and Polishes:** Beeswax is also used in the preparation of ointments, plasters, and polishes, thanks to its protective and emollient properties.<sup>[22]</sup>

### 3. Ghee



**Fig. 8: Ghee.**

**Synonyms:** Clarified butter.

**Biological Source:** Ghee is a type of clarified butter, often used in cooking, especially in South Asia. It's made by melting regular butter, which causes it to separate into liquid fats and solid milk components. After the solids are removed, the remaining liquid is ghee.

**Chemical Constituents:** In terms of its chemical makeup, ghee is primarily made up of fats, including triglycerides (fat molecules), free fatty acids, and other types of lipids. It also contains vitamins that dissolve in fat, like vitamins A, D, E, and K. Ghee made from cow's milk contains carotenoids, which are plant compounds that give it a yellowish colour. In addition to fats, ghee has small amounts of proteins, minerals like calcium and iron, and trace elements like phosphorus. Some ghee also contains tiny amounts of charred proteins from the milk (casein), which are left over from the clarification process.<sup>[40]</sup>

#### Uses

1. Ghee act as a natural moisturizer.
2. That helps remove dead cells and flaky skin.
3. Your dry and Ghee better for lips as it gives chapped skin the much-needed moisture and shine to your lip.<sup>[41]</sup>

#### 4. Honey



**Fig. 9: Honey.**

**Synonyms:** Madhu, madh, mel, purified honey.

**Family:** Apideae.

**Biological Source:** Honey is a thick, sweet liquid made by bees. They collect nectar from flowers, transform it through a special process inside their bodies, and then store it in the honeycomb. The most common bees that make honey are *Apis mellifera*, *Apis dorsata*, *Apis indica*, and other related species of bees.<sup>[12]</sup>

**Chemical Constituent:** The main composition of honey is carbohydrates that contribute 95–97% of its dry weight. Honey is made up of various important components, including proteins, vitamins, amino acids, minerals, and organic acids.<sup>[42,43]</sup> It also contains beneficial plant compounds like flavonoids and polyphenols, which have antioxidant properties. Other substances found in honey include reducing compounds, alkaloids, glycosides and cardiac glycosides.<sup>[44–46]</sup> Monosaccharides (fructose and glucose) are the most important sugars of honey and may be contributed to the most of the nutritional and physical effects of honey.<sup>[47]</sup>

#### Uses

1. Honey is a natural humectant, which means it draws moisture from the air to the skin and lip.
2. Honey is the best way to keep your skin constantly moisturized, fresh and supple.<sup>[41]</sup>

## 5. Olive Oil



**Fig. 10: Olive oil.**

**Synonyms:** Oleum olivae, sweet oil, Salad oil.

**Family:** Oleaceae.<sup>[12]</sup>

**Biological Source:** Olive oil is a liquid fat that comes from olives, the fruit of the *Olea europaea* tree. This tree is commonly found in the Mediterranean region. Olive oil is made by pressing whole olives to extract the oil from them. It's widely used in cooking and for its health benefits.

**Chemical Constituents:** Olive oil is mostly made up of triacylglycerols, which are a type of fat molecule. It also contains small amounts of free fatty acids, glycerol, phosphatides, pigments and sterols.

### Uses

1. It provides excellent hydration for your skin.
2. It helps heal cracked and dry lips and offers natural sun protection (SPF).
3. It keeps your lips moisturized and soft.
4. It can gently remove dead skin from your lips, leaving them fresh and rejuvenated.
5. It nourishes and keeps your lips healthy.<sup>[22]</sup>



## 6. Rose oil



**Fig. 11: Rose oil.**

**Synonym** – Rose otto, attar of rose.

**Family** – Rosaceae.

**Biological Source** - It is obtained from the petals of different Rosa species especially Rosa centifolia and Rosa damascena mill.<sup>[22]</sup>

**Chemical Constituents** - R. damascena contains many important components such as terpenes, glycosides, flavonoids, and anthocyanins.<sup>[48]</sup> This rose also contains carboxylic acid<sup>[49]</sup>, myrcene<sup>[50]</sup>, vitamin C.<sup>[51]</sup>, kaempferol and quercetin.<sup>[52]</sup> It also contains fatty oil and organic acids. The identified compounds were;  $\beta$ -citronellol, nonadecane, geraniol, and nerol and kaempferol were the major components of the oil.<sup>[53]</sup>

### Uses

1. It's used to add fragrance.
2. It helps create a more natural, pleasant aroma.
3. Rose essential oil is often used in cosmetics because it's great for your lips. It can help fade scars from acne, injuries, or other skin issues, leaving your skin smooth.
4. It's used as a perfume ingredient.
5. It makes your lips look fuller and plumper.<sup>[54]</sup>

### ➤ CONCLUSION

The use of pomegranate in herbal lip balm gives several potential benefits, because pomegranate seeds contain highly antioxidant properties, moisturizing, anti-inflammatory effects, soothing & calming effects; it can also protect against infections & any external



environmental factors. This lip balm is the solution for dry & cracked lips. Uses of natural excipients in lip balm formulation can also give many benefits to protect lips. This present review contains benefits of natural lip balm for healthy lips.

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