



## Modern Herbal Lipstick Quality Assessment and Standard: A Review

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### ABSTRACT

Lipstick is the most used beautifying agent added to cosmetics to increase the elegance of the lips. Lipstick is a type of makeup product that contain a huge quantity of pigments, candles, oils and emollient that gives colors, texture and lip protection. Several natural sources of excipients are used in the formation of lipstick. The regular use of synthetic colors in lipstick can lead to severe consequences such as skin discoloration, skin irritation, acne and cancer. Side effect can be reduced using plant-based plant extract based in the plants. This review on lipstick includes type, formulation method, diverse color pigment extraction, natural oil, taste, physical evaluation and quality control lipstick in industry, molds and lipstick defects. Cosmetic are utilized to improve the appearance of the face. At present, the requirements of natural cosmetic cosmetics are increasing day by day and are initiably natural gifts. There are several natural products which are used by women now a days. Unlike synthesis, plant cosmetics must be for human health. These formulations are based on herbs that always attract considerable attention due to their good activity and relatively small side effect with synthetic components. Natural cosmetic can be referred as beauty products that offers beneficial properties, such as improvement in skin texture, makes appearance attractive and many more.

**Keywords:** Lipstick, Herbal, Beauty products

### 1. Introduction

As per the Drugs and Cosmetic Act, 1940 and 1945 regulations, a cosmetic is any item intended to be used by spraying, pouring, rubbing, or sprinkling on or applying on human skin for the purpose of cleansing, glamorize, promote enhancement or enchantment or remodel the look. The lipstick obtains its colors of the dissemination of pigments and dyes of the lake. The first origin of lipstick can be traced back to the Demesne Sumerian of UR in 5000 BC. Over the centuries, the lipstick has been accepted and rejected by different cultures with swings in favour and against the change of products throughout history.[1] Flavours used in formulations must be non-toxic, soluble, compatible and consistent with the preparations. Masking the complex flavours of some ingredients, such as male fern extract which has a progression of sweetness, astringency, and bitterness, can be challenging. Also, Formulations for diabetics or weight reduction diets cannot include sweetening agents that increase blood sugar or calorie intake.[2] The phenomenon of herbs which today separates, beauty, health care and surrounding. The lips are one of the most sensitive areas of the body and are also in close proximity to the nose and mouth. The natural scent and composition of the colors used in lipstick can be absorbed through the skin, known as transdermal absorption, also through the lips and inhalation also of the selected combinations vapours of scent principle can trigger the release of neurochemical from the brain through the receptors located in oral cavity and desired effect is achieved by nose. In cosmeceutical application, function of the lipstick is harmless, respectful to the environment for protection of health and colors based on plants and useful aroma. Natural colors are now highly sought after and are also referred to useful agents for elevating physical health. Lotions, dusts, perfumes, lipstick, nails and fingers, eye makeup, colourful contact lenses, hair colors, aerosols, gels, deodorant, product for babies, bubble baths, baths salt and etc, there is a strong demand for many other products in both developing and developed countries, the demands for plants-based products increases rapidly due to its lack of side effect.[3].

#### 1.1 History of Lipstick

5000 years ago, in Mesopotamia, coloured cosmetics were first used by crushing and applying rare and semi-precious jewels on the lips and eyelids.[4] In 1915, lipstick started to be sold in metal tubes with a cylindrical shape. [5] A large portion of ancient civilization of Egypt used cosmetic to improve the appearance and also to provide protection from the sun and hot winds of desert, except for the poor who could not afford the cost of cosmetics, whereas the lipstick became a daily part of their lives. In the past seaweed extract, iodine and bromine mannite were used to make early lipsticks, which were extremely hazardous. Eventually they figured out how to extract the carmine colour from ants and beetles. Red lips were frequently used to depict Cleopatra (51-30 BC). Cosmetic were virtually non-existent in Europe for the first 1500 years after Cleopatra's reign at least until the renaissance. Lipstick as a phrase wasn't coined until 1880 and it wasn't widely used until the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. Lipstick and other cosmetic gained popularity in the 1920s and this tendency has persisted to the present day. [6] Lipstick is currently a necessary item for many consumers. A wide variety

of colour tones and textures are available. To meet the rising demand, lipstick is being marketed in hundreds of different colour tones as can be seen everywhere. [7]

### 1.2 Lipstick in Modern

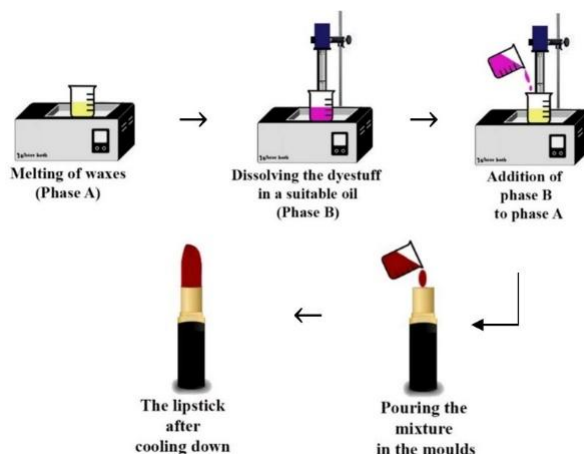
At the world's fair in Amsterdam in 1883, in the first contemporary cosmetic lipstick was unveiled and by 1884 Parisian perfumes has started selling them. Lip and cheek rouge began to be advertised and in late 1890s they were sold in the sears Roebuck catalogue. Silk paper, paper tubes and miniature pots were all common forms of packaging for early lip cosmetic. The tube lipstick is credited to two inventors, who made lipstick a carry able accessory for ladies. The metal tube container for lipstick was created by Maurice Levy in 1915. It has a little lever on the side that may be used to raise and lower the lipstick. The "Levy Tube" is what Levy dubbed his creation. [8] There are several types of lipstick depending upon compositions used, including:

- Matte lipstick: This type of lipstick has a dry, non-shiny finish and is long-lasting.
- Cream lipstick: This type of lipstick has a creamy texture and provides a moderate amount of shine.
- Glossy lipstick: This type of lipstick has a shiny finish and is often used to add a touch of glamour to a look.
- Stain lipstick: This type of lipstick is designed to provide a long-lasting tint to the lips without feeling heavy or sticky.
- Liquid lipstick: This type of lipstick is applied with a brush or wand and dries to a matte or glossy finish.
- Balm lipstick: This type of lipstick is a hybrid of a lip balm and a lipstick. It is moisturizing and is usually tinted.
- Metallic lipstick: This type of lipstick has a metallic finish, often in gold, silver or copper shades.

## 2. Method of Preparation

The kind of substance utilised affect lipstick creation just very minimally. The moulding technique might be recommended as a typical way for making lipstick.

Plant based lipstick has been formulated according to the general method of formulating lipstick. To put it briefly, using a Chinese box all of the hard, mild waxes were melted over a double boiler or a heating coat in decreasing order of melting point. The thick solution of pigment and coloring agent were mixed and heated with castor oil, the two phases mixed with a certain temperature. In excess, the liquid was poured into lipstick molds while they were held in an ice bath. Rose oil, lemon juice and powder, and vanilla essence were added to 400° C. The lipstick was taken out of the mold and irritated after a portion of the solidification excess was scraped away with the blade. The prepared lipstick was installed in a lip container and used for a more in-depth assessment. [10, 11]



**Fig. 1. – Standard method for preparation of lipstick**

### 2.1 Multistep included in process

1. To begin, melt and combine the raw materials in accordance with their respective melting points.
2. Heat solvents, oils, and waxes separately in ceramic or stainless-steel vessels.
3. Next, combine the liquid with the colour pigments and the solvents.
4. Combine the heated wax and the quantity of pigments.

- After cooling, take the lipstick from the mould, pour it into tubes, and finally incorporate them into the lipstick box.

### 2.2 Standards attributes for lipstick

- It must be safe and not cause irritation.
- It should transmit a uniform colour to the application area.
- Celia should make the lips soft.
- It should have stability under environmental conditions.
- The container must work easily.
- Livestock must be completely released. [12]

### 2.3 Advantages of Lipstick

- Natural lipstick's components are completely pure and safe to use.
- They also have organic ingredients that support healthy lips.
- They have little to no effect on looks.
- They are used to treat lip leukoderma and are non-toxic, highly lipophilic, antioxidant, and anti-inflammatory medications.
- They offer a large selection of colours.
- Different combinations and shades can be achieved easily.
- Basic colour may be modified into several colours by adding organic and inorganic acid. [13]

### 2.4 Herbal lipstick formulation

An herbal lipstick is a type of lipstick that is made with natural ingredients, such as herbs and plants, as opposed to synthetic ingredients. The ingredients in herbal lipsticks are usually plant-based and free from harmful chemicals. Some examples of herbs that are commonly used in herbal lipsticks include:

- Aloe vera:** Aloe vera is known for its moisturizing and soothing properties, making it a popular ingredient in herbal lipsticks.
- Chamomile:** Chamomile is known for its anti-inflammatory and soothing properties, making it a great ingredient for soothing irritated or dry lips.
- Calendula:** Calendula is known for its healing properties, making it a great ingredient for lipsticks aimed at treating chapped or damaged lips.
- Beetroot:** Beetroot is known for its natural pigmentation, making it a great ingredient to provide colors to herbal lipsticks.
- Rose petals:** Rose petals are known for its moisturizing and soothing properties, making it a great ingredient for soothing irritated or dry lips.

Herbal lipsticks are often free from synthetic colors and fragrances, making them a great option for people with sensitive skin. They are also eco-friendly and cruelty-free. [14]

**Table 1 – Ingredients importance and standard quantity for Herbal lipstick formulation.**

Ingredients	Importance	Quantity				
		S1	S2	S3	S4	S5
Palash Flower	Colouring agent	4g	5g	4.6g	5.3g	5.2g
Turmeric Powder	Anti-bacterial	6g	5g	5.6g	5.3g	5.2g
Strawberry Essence	Flavouring agent	2ml	1.8ml	1.5ml	2ml	1.9ml
Lemon Juice	Anti-oxidant	2ml	1.9ml	1.8ml	2.1ml	2.2ml
Mustard Oil	Blending properties	50ml	55ml	53ml	57ml	54ml
Gum Acacia	Glossy & hardness	16g	16.9g	16.5g	16.9g	15g
Bees Wax	Glossy & hardness	16g	16.9g	16.5g	16.9g	15g
Ripe fruit of Shitake	Surfactant	6g	6.5g	6g	7g	8g
Vanilla Essence	Preservative	q. s	q. s	q. s	q. s	q. s

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### **3. Evaluation Parameters**

Herbal lipstick assessment is a very essential thixotropic, the application force, surface anomalies, etc. Soluble dyes satisfy the first condition, whereas insoluble dyes and pigments that increase or decrease the film's opacity satisfy the second. [15].

#### **3.1 Fusion point**

The melting point must be established since it indicates the maximum safe storage temperature. The capillary tube method was used to determine the formula lipstick's melting point. The capillary was filled, kept inside the capillary apparatus, and at first it was seen that the product was released slowly. It was seen that the product had entirely melted after some time. The preceding technique was repeated three times, and a new formulation's melting point ratio was noted each time.

#### **3.2 Rupture point**

The rupture point is performed to determine the resistance of the lipstick. The lipstick remains horizontally at a base of ½ inch of the edge of the support. The weight gradually increases by a specific value (10gm) to a specific 30 sec interval and the weight in which the break is considered as the rupture point.

#### **3.3 Thixotropic Character**

It is carried out with a penetrometer and serves as a measure of thixotropic quality. Under a 50gm load at 25° C, a standard specified diameter needle is permitted to pierce for 5 sec. The lipstick's thixotropic structure is measured by the depth of penetration.

#### **3.4 Application Force**

It is a measuring test that compares the force that will be used for the application. Lipstick can be applied at a 45-degree angle to a square area of one inch until it is entirely covered on a piece of thick brown paper balanced on the shadow table. The application force is indicated by the pressure readout.

#### **3.5 Surface Anomalies**

This is investigated through surface flaws such the growth of crystals without a surface, mould, fungus, etc.

#### **3.6 Aging Stability**

The product was kept for one hour at 40° C. Several factors are noticed, including bleeding, surface crystallisation, and application ease.

#### **3.7 pH parameters**

The pH metre was used to calculate the pH of the herbal pencil formulation.

#### **3.8 Skin Irritation Test**

It involves putting the product on the skin for 10 min and evaluating for the signs of irritation. If no irritation occurs sample qualifies.

#### **3.9 Perfume stability**

After 30 days, the composition of an herbal lipstick was tested to capture the scent.

Some common defects that can occur in lipstick formulation include:

1. Feathering or bleeding: Lipstick colors bleeding or spreading outside the lip line
2. Settling: Separation of ingredients in the lipstick, leading to uneven colors or texture
3. Caking: Lipstick becoming dry, crumbly, or difficult to apply
4. Grittiness: Presence of small particles or crystals in the lipstick
5. Slumping: Lipstick melting or becoming too soft in high temperatures
6. Shrinking: Lipstick becoming smaller in size
7. Discoloration: Lipstick colors changing over time

8. Wrinkling: Lipstick wrinkles forming on the surface of the product
9. Unpleasant odour or taste: Lipstick having an off-putting smell or taste.

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#### 4. Conclusion

The review highlights the benefits of herbal components and discussed the formulation and production of traditional lipsticks. This review also helps to establish quality attributes for the modern-day production of lipsticks. In conclusion, herbal lipsticks are a great alternative to traditional lipsticks that are made with synthetic ingredients. They are formulated with natural ingredients such as herbs and plants, which offer a range of benefits for the lips and overall skin health. Herbal lipsticks are free from harmful chemicals and synthetic colors and fragrances, making them a great option for people with sensitive skin. They are also eco-friendly and cruelty-free. Additionally, many herbal lipsticks contain ingredients that are known for their moisturizing, soothing, and healing properties, making them a great option for people with dry or damaged lips. Overall, herbal lipsticks are a natural, safe, and effective option for anyone looking for a high-quality lip colors product.

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