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Bright and Adaptable: An Extensive Review of Lipstick

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ABSTRACT: Herbal cosmetics, which are inevitable gifts from nature, are becoming more and more popular worldwide. A cosmetic product called lipstick gives lips colour and texture by combining pigments, oils, waxes, and emollients. It is the most popular cosmetic product used by ladies to give their lips an appealing colour and look. Lipstick comes in a lot of varieties. Since ancient times, there has been an unimaginable need for natural pigments or colorants in cosmetics. "The purpose of this review was to look at information about lipsticks, the materials used to make them, with an emphasis on natural substances, the processes used to prepare them.

KEYWORDS: Cosmetic, Lipstick, Pigment, Colorants, Natural Substance.

I. INTRODUCTION

One of the most popular cosmetic items is lipstick. Wearing lipstick can have therapeutic, psychological, and social effects [**1**].Lipsticks improve a person's appearance and appeal by colouring their lips and shielding them from the outside world. But modern lip care products prioritize both aesthetic and, ideally, therapeutic benefits for customers' lips. As a result, medicated lipsticks with active medical compounds started to appear on the market. Because the composition contains an active medicinal substance, the medicated lipsticks may offer protection against bacterial infections.This function adds on to the existing role of lipsticks, which provide moisture and emollient action to prevent cracking and chapping of the lips [**2**].The market is seeing an increase in demand for these products because most consumers these days favour natural products over chemical ones [3]. Natural cosmetics not only satisfy since they don't contain artificial chemicals and have comparatively less negative effects, but they also give the body nutrients and improve a person's health [**4**].

Throughout history, women from every phase of life have used lipsticks to enhance their lips' colour. The oil-wax basis of lipsticks is sufficiently rigid to remain in place. Compared to other cosmetics, lipstick contains red pigment that is integrated into oil and red staining dye that is scented and appropriately flavoured.

Ideal lipstick qualities:

1. It should leave a thin layer on the lips and be easy to apply and smooth.
2. It must not be harmful or irritating.
3. It need to have amazing luster, colour, wetness, and wear. There should be no grittiness in it.
4. The necessary plasticity should be present.
5. Both internally and externally, it should be harmless.

Usually made as moulded sticks, these are made of colouring pigment dissolved in a wax-containing fatty basis [5].

II. MATERIALS AND METHODS

Table. 1 The natural ingredients with their functions & quantities [6-9]

S.NO	INGREDIENTS	FUNCTIONS	QUANTITY
1	Castor oil	Blending agent, emollient, solvent	40-50
2	Lemon oil	Antioxidant, preservative,	0.1-1

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		flavouring agent	
3	Olive oil	Blending agent, lipstick base	10-30
4	Bees wax	Glossy, hardness, emollient	3-10
5	Candelilla wax	Lipstick base and moisturizer	1-10
6	Carnauba wax	Lipstick base and moisturizer	1-5
7	Ginger powder	Antimicrobial agent	2
8	Turmeric powder	Antimicrobial agent	5-6
9	Ripe fruit powder of Shikakai	surfactant	12
10	Hylocereus polyrhizus	Antimicrobial agent & colouring agent	4

The basic manufacturing process of lipstick

The primary production procedures used in the manufacture of herbal lipstick include:

Pigment pre-milling:

The initial stage in the production of herbal lipstick, which breaks up the powder's agglomerates to give the lipstick a uniformly smooth colour.

Melting and mixing:

The next step is the melting and mixing phase. Waxes cannot be combined with other substances to facilitate this process because they are solid at room temperature. To produce a homogenous product, it is typically combined with oil and melted to the melting base, after which pigment and further ingredients are added and combined.

Fig-1

Moulding:

The actual process of moulding involves pouring the melted lipstick into a metal or plastic mould while it is still hot, which helps it solidify. The mixture is then gently pressed out of the mould

Fig-2

Flaming:

The final process, flaming, involves passing the lipstick into a flame. It is usually held and twisted for a maximum of one second before being taken out to prevent melting and losing its shape. This gives the lipstick a glossy finish, and it is then put into containers[10-12].

Fig-3

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Flaws in the Formulation of Lipstick: [13,14]

1. Sweating: Because of the high oil content or poor oil binding, it is the most prevalent issue with lipstick composition. In every temperature range or climate, it may rise.
2. Bleeding: This is the process by which coloured liquids separate from the waxy base.
3. Streaking: The final product has a thin band or line of a distinct colour or substance.
4. Moulding: Associated Issues After congealing and solidifying, laddering lipstick appears multi-layered rather than smooth and uniform.
5. Deformation: The lipstick's shape appears distorted due to a moulding issue. It shows up on both sides of the lipstick and is rather prominent.
6. Packing: When the stick develops dimples, this manifests as burning in split moulding.
7. Mushy Failure: This issue occurs when the lipstick's core splits and lacks structure.

Herbal lipstick evaluation:

Colour and Texture:

The colour, gloss, and smoothness of the lipstick formulations were examined.

pH: A digital pH meter and a pH meter were used to measure the herbal lipsticks' pH. [15-18]

Spreadability test : The capacity of lipstick consistency to spread across a surface is assessed using a spreadability test . In two earlier experiments, this test was carried out by applying lipstick to a glass slide or paper for a minimum of 3 cm. The creation of a protective layer from the lipstick was then visually examined for smoothness and homogeneity [19-21].

Softening Point: The goal of this test is to as certain whether lipstick can tolerate the variety of conditions that it will encounter in the customer's purpose. The ring and ball method was employed by Bhagwat et al. (2017), who put the lipstick in a ring and refrigerated it at 6 °C for 10 minutes. A water bath was used to position and submerge the ring and ball assembly. When the temperature reaches 45 °C, it should increase by 1 °C every minute. The temperature at which the ball passed through the lipstick sample was found to be the softening point .Between 68 and 74 °C was the intended softening point. Better lipstick stability was indicated by a higher softening point [22-24].

Surface irregularities: This was investigated by looking at surface flaws such crystallization, mould and fungal contamination, wrinkles, and the exudation of liquid and solid fats.

Stability aging: The prepared herbal lipstick was kept for one hour at room temperature (20 to 250 °C), refrigerator temperature (40 °C), and high temperature (30 to 400 °C). Bleeding, streaking, catering, and flowering were among the factors that were observed.

Stability of perfumes: To record smell, the prepared herbal lipsticks were tested for 30 days.

Test for skin irritation: The procedure involves putting the product on the skin for ten minutes and watching for any indications of irritation.

Identifying the Melting Point: Since it indicates the upper limit of safe storage, the melting point is a crucial parameter for lipstick composition. The capillary tube method was used to find the lipstick's melting point. Approximately 50 mg of lipstick sample was obtained and melted and put into a glass capillary tube opening at both ends. After 24 hours of ice cooling, the capillary was heated using a thermometer. The capillary thermometer was positioned deep into the water-filled beaker set on a heating plate with a magnetic stirrer. Stirring and heating were initiated gradually at a predetermined pace. A melting point was defined as the temperature at which a substance flows through a capillary tube.

Finding the hardness: Using a Monsanto hardness tester, a random selection of lipstick formulations was measured. Each formulation's average result was computed and noted.

Rancidity: Because the endpoint in the peroxide number determination may not be very sharp, this test is likely to be vitiated when performed on dark-coloured lipstick. In these situations, it is expected that the producer will use the peroxide number test as a good manufacturing practice to regularly verify the rancidity of lipstick raw materials, particularly vegetable oil and other components that are prone to rancidity in lipstick base combinations without colours.[25-35]

III. CONCLUSION

This can be concluded stating that the ingredients and waxes used to prepare lipstick formulas are highlighted in this review. Since the review involves analyses of evaluation criteria for lipstick, using natural ingredients is a step toward healthier cosmetics that women can use extensively and comfortably.

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