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Review Article

A REVIEW ON HERBAL LIPSTICK FROM DIFFERENT NATURAL COLOURING PIGMENT

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Abstract
Cosmetics are still in high demand now because they have integrated themselves into our culture and fashion. Lip glosses are most frequently utilized to improve lip appeal, and they also play a significant role in maintaining health and happiness. Synthetic colorants have been discovered to be naturally carcinogenic and may induce allergy reactions. The need for cosmetics has been enormous since antiquity. For lips to look more beautiful, lipstick formulas are utilized. A cosmetic item called lipstick gives the lips color, texture, and protection by combining pigments, oils, waxes, and emollients. All- natural and safe to use, the ingredient in natural lipstick. Natural nutrients that maintain healthy lips are also present.
Use of synthetic lipstick colors on a regular basis has the potential to have major negative effects, including cancer and skin rashes. The negative impact can be minimized by utilizing natural color extracts from various natural sources. The formulation, extraction of natural colorants, assessment of lipstick, and flaws in lipstick are the primary topics of this review

INTRODUCTION

Cosmetics are substances used to improve the physical appearance of people. Cosmetics such as skin care creams, lotions, powders, perfumes, lipsticks, finger- and toe-nail polish, eye and facial makeup, coloured contact lenses, hair colours, and many other items are in high demand in both developed and developing nations. A priceless gift from nature, herbal cosmetics are in increasing demand on the global market. You can fulfil your beauty regimen using a variety of herbal cosmetic products. Herbal preparations are cosmetics containing active biological components, nutraceuticals, or medicines.[1]. People are kept away from healthy diets by modern lifestyles. Increased consumption of foods that help with sickness prevention is necessary for healthy eating habits. The main sources of naturally occurring antioxidant components are fruits and vegetables. Antioxidants provide defense against dangerous free radicals and lower the incidence of heart disease and cancer [2].

The market for herbal cosmetics is expanding and they are a priceless gift from nature. There are many herbal cosmetics products available to fulfil your beauty regimen, and using herbal ingredients in cosmetics is highly safe for the skin. Since the development of science and technology, people have used herbs for a variety of purposes, including food, medicine, and beautification. Vegetarians still consume exclusively plants for food. However, there has been a revival in the use of herbs in both medicine and cosmetics.[3]. Cosmetics have been connected to numerous historical occurrences since their discovery, including civic turmoil, superstition, animal killing, and religious beliefs.[4]. The stain texture, colors, and lipstick lustre have all undergone significant improvement as a result of the drug's increased use.[5] The goal of the current effort is to create a herbal lipstick with little to no side effects that will be widely used by the public due to the numerous negative effects of synthetic preparations now on the market. It's time to continue using herbal remedies and adopt a more natural lifestyle for the foreseeable future.

Good lipstick should have the following qualities:

1) It shouldn't irritate.
2) Plasticity ought to have been necessary.
3) It need to be non-toxic.
4) It ought to be chemically and physically stable.
5) It shouldn't dry out while being stored.
6) It need to be devoid of large particles.
7) It should keep the colour of your lips after application for a longer period of time.
8) It should have a bright, dry appearance without any perspiration.
9) It should have a pleasing flavour, aroma, and taste.
10) Within a reasonable range of climatic temperature, it shouldn't melt or harden.[6]

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Anatomy of Lips: The "Labium supeSriusoris" and "Labium inferiusoris," respectively, are names for the upper and lower lips. The vermilion border is the point where the lips and skin meet together around the mouth, and the vermilion zone is the normally reddish region inside the borders. The Cupid's bow is the term used to describe the vermilion border on the top lip. The fleshy protrusion in the middle of the top lip is referred to as a tubercle by a number of names, including the procheilon (sometimes written prochilon), the "tuberculum labiisuperioris," and the "labial tubercle." The philtrum is the term for the vertical groove connecting the nasal septum. In contrast to regular face skin, which has up to 16 layers, the skin on the lips has three to five cellular layers, making it exceedingly thin. The lip skin has less melanocytes in those with light skin. This causes the blood vessels to protrude through the skin of the lips, giving them their distinctively red colour. This effect is less noticeable with darker complexion since the skin on the lips in this case has more melanin and appears darker. The membrane (mucous) inside the mouth and the outside skin of the face are separated by the lip's skin. The first pharyngeal arch's mandibular prominence, a branch, shapes the lower lip. The anterior mandibular body is encased in the lower lip. The orbicularis oris surrounds it inferiorly and acts as a depressor labii inferioris muscle. The upper lip covers the anterior side of the maxilla's body. The name "vermillion" refers to the colourful area of either the upper or lower lip. Its upper half is of normal skin colour and has a depression in the centre, under the nasal septum, known as the philtrum. When your mouth is extended wide in front of a mirror, you can see the thin lip lining connecting it to the lower lip, which is lifted by the levatorlabii superioris. Fetal alcohol syndrome, a permanent impairment brought on by alcohol consumption during pregnancy, has several facial features, including flattening of the philtrum and thinning of the upper lip.[7]

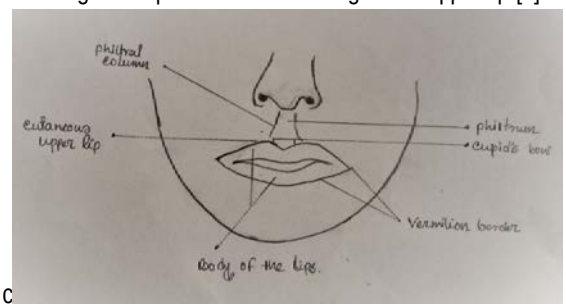

Fig 1: Anatomy of lips

Advantages of Natural Lipstick

1) The natural lipstick's component is completely safe to use and all-natural.

2) They also have organic nutrients that support healthy lips.

3) They have less severe or minor effects.

4) They are used to treat leucoderma of the lips and are non-toxic, highly lipophilic, anti-oxidants, anti-microbial, and anti-inflammatory.

5) A wide variety of colour options to select from.

6) Colorants come in a variety of original colour tones, including deep magenta, dark purple, orange, and deep violet. They also come in purplish red, ruby red, beetroot purple, and dark violet.

7) These colors can be combined in many ways to produce various colors.

Components of Lipstick: Lipstick is made up of waxes, oils, pigments, and emollients that have their melting points and viscosities customized. Various substances are used in the creation of lipstick. They are

Table 1: Components of lipstick and their function

INGREDIENTS	% (W/W)	FUNCTION
Softening agent (wool fat, lanolin, lecithin, cocoa butter)	15	Lubricates lipstick after application
Solid waxes (bees wax carnauba wax, candelilla wax)	10	Provides hardness and creaminess
Oil (castor oil, liquid paraffin)	65	Adding great gloss and distributing the color to the lipstick.
Miscellaneous agents (Preservatives, antioxidants, flavors)	q.s	Stabilize the formulation
Coloring agent/ pigment/ staining dyes	q.s	Give colour
Perfumes	q.s	Give aroma

Difference between Lip and regular skin structure: Lip is more beautiful as compared to normal skin. Regular skin typically includes 15 to 16 layers in the top corneum layer, primarily for protective reasons. In comparison to the ordinary face skin, the upper layers of the skin (corneum layers) are quite thin, with only 3 to 4 layers total. Because there are so few melanin cells in lip skin, blood vessels may be seen more clearly through the lip skin, giving the lips their attractive pinkish hue. Because the lip skin lacks hair follicles and sweat glands, it cannot be protected from the environment by body oil and sweat.[8]

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Natural Coloring Agents: Natural sources, including plants, animals, insects, algae, and more, extract natural colouring compounds. Natural colourants are primarily

taken from a variety of plant sources, including fruits, roots, seeds, and leaves, among others.

Table 2. The natural colouring agents:[8]

Colour	Chromophore Plants	Plant Sources
Red	Lycopene	Beetroot, strawberry, Tomato, Pomegranate watermelon,
Yellow orange	Caroteniods	Papaya, Carrot, pineapple, pumpkin, Orange.
Green	Chlorophyll	Avocado, kiwi Broccoli, Cucumber, Spinch
Purple blue	Anthocyani	Grapes, Blueberry, Pulm, Purple cabbage, Black berry.

Extraction of natural colouring agents:

Extraction of Betanin from *Beta vulgaris* (Beetroot): The Caryophyllales order of plants produces natural, water-soluble pigments called betalains. They are abundant in the basidiomycetes family of fungus and the red beet (*Beta vulgaris L.*) [9] The primary source of "beetroot red," a naturally occurring red dye, is beets. The primary component of the red colouring material obtained from ordinary beets is betanine. While golden yellow and red-and-white striped varieties are also available, deep red-purple is the most common colour of the roots. A homogenised mixture of fruit pulp and solvents (1/1 w/v) is used to extract the pigment. 100 g of the watery, peeled fruit should be macerated for 15 minutes in an ice bath with 100 mL of aqueous ethanol and EtOH. The aqueous mixture should be centrifuged for 20 minutes at 4°C and 18,000 rpm before being promptly filtered through nylon mesh. Concentrate the extract to 3–4 ml using a rotating evaporator while it is being vacuum-packed at 35°C.[7]

Extraction of Lycopene from *Daucus carrota* (Carrot): A few non-photosynthetic fungi and bacteria as well as some photosynthetic plants produce the isoprenoid group of pigments, which includes carotenoids. Since most animals are unable to manufacture carotenoids, they must receive them through food. [10] Lycopene can be found naturally in foods like tomatoes, watermelon, pink grapes, pink guava, papaya, and apricots [2].

METHOD OF PREPRATION:

1) Melt and combine each raw component individually by their melting points first.
2) warm the solvents, oils, and waxes in separate ceramic or stainless steel containers.
3) After that, combine the liquid solvents with the colour pigment.
4) The lipstick is then placed into tubing moulds, allowed to cool, and then removed from the moulds and placed inside the lipstick case.[6]

Evaluation of Herbal Lipstick:

Melting point: Take the capillary tubes' open ends. Introduce enough 10mm high lipstick into each of the five capillary tubes. Let the tubes stand for the required time and at the specified temperature. The melting point of the lipstick in the capillary tube is then determined. With the additional 4 capillary tubes, perform the procedure three more times, then compute the outcome.

Force of Application: This is a test to ascertain the force that should be used during application. Apply lipstick at a 45° angle to cover a 1-inch square area until completely covered. Keep a piece of coarse brown paper on a shadow graph balance. The pressure leading indicates the amount of force being applied.

Surface anomalies: This test is used to identify surface flaws, such as the absence of surface crystal formation or contamination by moulds or fungi.

Solubility test: In various solvents, dissolve the lipstick, and then check each solvent's solubility.

PH parameters: Use a pH meter to ascertain the lipstick's PH.

Skin irritation test: Apply it for 10 minutes and watch.

Thixotropy character: By employing a penetrometer, it was possible to determine the thixotropic quality. When subjected to a 50gm load at 25°C, a standard needle of a certain diameter was allowed to pierce for 5 seconds. An evaluation of lipstick's thixotropic structure was made using the depth of penetration.

DEFECTS IN LIPSTICK

Formulation Related Problem

Sweating: Due to a high oil content or poor oil binding, this is the most typical lipstick formulation issue. It can increase in any type of weather or temperature.

Streaking: The final product has a narrow band or line that is a different colour or material.

Molding Related Problems:

Deformation: It appears that the lipstick's shape is warped due to a molding issue. Both of the lipstick's sides have it, which is noticeable.

Cratering: When a stick develops dimples, this manifests as split molding and flares up.

CONCLUSION: This review comes to the conclusion that using natural colorants in lipstick formulation has no or very little negative side effects. As a result, we can prepare

lipstick using natural colourants. Therefore, using natural colour is a step toward healthy cosmetics, and ladies can do it with great joy.

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