

A Review on Herbal Lipstick

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Abstract- *Cosmetics are substances used to change the way the human body looks or smells. The desire for herbal cosmetics is rising today and they are unavoidable gifts from nature. To meet the needs of ladies, a variety of herbal cosmetic items are available. Herbal cosmetics are safer for human health than synthetic ones. A lot of attention has always been paid to herbal formulations such as herbal lipsticks, herbal creams, herbal shampoos, and herbal paste due to their good activity and relative lack of adverse effects when compared to synthetic materials. The demand for herbal-based products has been driven by natural products' inherent dependability and safety. Among modern ladies, the usage of herbal cosmetics has grown in popularity. It has been discovered that synthetic colouring compounds are employed in cosmetics. It has been discovered that the artificial colouring compounds used in cosmetics have carcinogenic effects. The creation and evaluation of herbal lipsticks employing colourants from natural sources, including carrot, beetroot, turmeric, tomatoes, pomegranate, and cocoa, was the goal of the current study. Herbal lipstick was created using a variety of natural components, including beeswax, carnauba wax, vanilla essence, castor oil, white soft paraffin, strawberry essence, vitamin E, and lemon juice. Smooth lips, shiny lips, and moist lips can all be achieved with simple cosmetic application. Lipstick can significantly change the user's apparent facial features when applied correctly.*

Keywords- lipsticks; lipstick's formulations; cosmetics; characterization of lipsticks; lipsticks methods of preparation.

I. INTRODUCTION

Women most frequently use lipstick as a cosmetic to give their lips an attractive colour and appearance. Lipstick has the power to alter a woman's apparent face feature. These are often produced as moulded sticks and are made of colouring pigments that have been dissolved or distributed in a fatty base made of an appropriate mixture of oils, fats, and waxes that have been fragrantly scented [1-3]. Herbs are now increasingly being used in the manufacturing of cosmeceuticals for personal care [4]. Natural or herbal cosmetics are the current craze that encompasses both health and beauty care [5]. Since most people today choose natural over artificial items, these goods are in more demand on the market [6].

Cosmetics are defined as any item that is intended to be sprayed, poured, rubbed, sprinkled on, injected into, or applied to the human body or any portion of it in order to clean, glamorise, promote enchantment, or alter one's look, as per the D&C Act of 1940 and Rules of 1945. [7] Lipstick gets its colour from the diffusion of pigments and lake dyes, but there are now more pigments available than just boron acid, D&C Red No. 21, calcium lake, which contains D&C Red 7 and D&C Red 34, and orange No. 17. [8]

Herbal cosmetics, often known as products, are created by formulating a base using a variety of legal cosmetic components before adding one or more herbal substances that are used solely to deliver specified cosmetic benefits. Herbs don't provide quick fixes. They provide a means of realigning the body with nature. Recently, a large variety of cosmetic and toiletry formulas have been created and developed using Indian herbs. In addition to their historically noted uses, Indian herbs have also been tested in certain recent personal care product experiments. Because of their skin-friendliness and absence of side effects, the market for herbal medications is rising quickly. The nicest part about herbal cosmetics is that they are completely created from herbs and shrubs and have no negative side effects. The herbal ingredients are all natural and have no negative effects on the body of a person; instead, they give them nutrients and other beneficial minerals[9].

In some cases, customers may experience injury if they regularly use synthetic items that contain ingredients like lead, petrolatum, and phthalates. These products may irritate the lips, leave them dry and chapped, and increase your risk of developing allergies, asthma, and cancer [10].



Figure 1 – Shades of lipsticks

Lipstick Background:

Cosmetics have a long history dating back to the Stone Age. Particularly among the Sumerians, Syrians, Persians, Egyptians, Babylonians, and Greeks, lip colour use was widespread. Later, in accordance with the fashion of the day, Elizabeth I and the ladies of her court would tint their cheeks and lips with red mercuric sulphide for years. In late 19th-century western society, it was widely believed that only immoral women used any cosmetics or lipstick. Lipstick and other cosmetics did not truly become accepted in society until the 20th century. The price of cosmetics was brought down by advancements in applicator and metal tube construction. This resulted in widespread use and a rise in popularity, along with the general public's acceptance of the new technology. Push-up tubes were available by 1915, and the first indelibility promises were made. Lipstick is available in a wide variety of colours and is designed to appeal to the newest fashion trend. In a fragrance oil-wax base, pigments and dyes are used to create lipstick. Lipstick comes in a variety of tubes, from affordable plastic dispensers for lip balm to elaborate metal tubes. Although sizes vary, lipstick is often offered in tubes that measure 50 inches (1.3 cm) in diameter and 3 inches (7.6 cm) in length. The tube is made up of a base and a cover. Two compartments make up the foundation, and by twisting or sliding one of them, the lipstick will be pushed up to be applied. We will exclusively concentrate on the manufacturer of lipstick because making tubes requires using entirely unique technologies [11].

Lipstick, however, eventually disappeared from the stage as religion cast a cloud over the mind and led many to believe that cosmetics is the devil's masquerade. Developed nations did not achieve modernisation and quick economic expansion until the modern Industrial Revolution. Shortly after, during the American feminism movement for women's suffrage, lipstick came to represent women's freedom, emancipation, and feminism. With the start of World War II, lipstick was once again given a wartime makeover. Campaigns like War, Woman, and Lipsticks encouraged women to don bold lipstick hues to inspire the nation's high spirits and implied that doing so was a successful strategy for going to war. Following the fall of the Berlin Wall in the 1970s, many people began pursuing personal freedom and individualism, which prompted them to select striking lipstick hues like purple and black to convey their outlandish, nonconformist, and rebellious appearance. Lipstick has unquestionably been associated with unique significance throughout history. The evolution of lipstick is a reflection of human evolution and is connected to the way that women live today. [12].

Women and beauty:

Every day, the media and advertising reinforce the association between cosmetics and beauty. Young girls are being commodified by society as they attempt to resemble the unattainable ideal of a slender, attractive model that is sometimes shown in the media. The transformation of the body into a recognisable flawless form was also explored, and it was proposed that women "normalise" their bodies to achieve an image that is prized as the cultural standard by engaging in consumer rituals of self-care.

Difference between Lip and regular skin structure:

Lips are more appealing than ordinary skin. The top corneum layer of normal skin typically includes 15 to 16 layers, primarily for protective reasons. In comparison to the ordinary face skin, the top corneum layers of the lip only have three to four layers and are quite thin. 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. When exposed to cold, dry air, the skin on the lips has a tendency to dry out and form tiny cracks, which makes this unique skin particularly sensitive to other environmental influences. Therefore, lips must receive extra care and protection. Apart from this factor, the merely fanciful aspect of lipstick or lips obviously plays a considerable role. Lipsticks hold the majority of the market share for the care and adornment of the lips due to its simplicity and practicality. The perfect lipstick should taste neutral and be simple to apply. Light pressure on the stick should produce a film of fat that adheres well to the lips, leaving them smooth and supple, the film should not be greasy, sticky, or subject to smudging. In the case of decorative lipsticks, the goal is an indelible colouring of the lips coupled with firm adherence to the colouring matter. Regrettably the requirements for stability conflict with the ideal application properties. A lipstick must also be mechanically stable and temperature resistant, and it must not "Sweat" (That is there should be no visible separation of small oil droplets) with decorative lipsticks it is necessary to pay special attention to the stability of the colouring agents [13].

Herbal Cosmetics:

The demand for herbal cosmetics is rising globally and they are a useful gift from nature. There are many herbal cosmetics products available to fulfil your beauty salon, and using herbal ingredients in cosmetics is more safer for the skin. Since the development of science and technology, people have been using herbs for a variety of purposes, including food, medicine, and cosmetics, with the exception of food,

vegetarians now solely utilise plants. The use of herbs as medicines and cosmetics is, however, on the rise once again. Natural compounds can pass through the protective layer of human skin. In order to avoid allergic responses, allergic disorders, and any other adverse effects, consumers always look for cosmetics made of natural ingredients. Lipstick is a substance used to colour the lips, and it has been used for this purpose since prehistoric times. The demand for this product's various hues, textures, and lustre has surged in recent years as its popularity has grown.

Since the Vedic and Puranic eras, cosmetics have been used to enhance or preserve the beauty of the human body. The ancient human people of the tribal era decorated their bodies with animal parts, vegetable leaves, flowers, colour stones, shells, etc. Cosmetics are referred to as "items intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body for washing, beautifying, promoting attractiveness, or altering the look" in accordance with the FD&C Act. Skin care, creams, lotions, powders, lipsticks, fingernail polishes, eye and face makeup, hair colours, deodorants, infant products, bath oils, and a wide range of other products are all considered cosmetics. Soap is not a part of it. [14].

Herbs Used in Cosmetics/Cosmeceuticals:

There are numerous herbs available naturally having different uses in cosmetic preparations for skincare, hair care and as antioxidants, fragrant etc. Some of the important examples are as follows:

Skincare:

Coconut oil: The dried kernel of copra, which contains 60–65% oil, is crushed to create it. Lower chain fatty acid glycerides are abundant in coconut oil. Coconut oil is made from the fruit or seed of the *Arecaceae*-family coconut palm tree *Cocos nucifera*. Since coconut oil is easily usable in liquid or solid form and has a melting point of 24 to 25°C (75-76°F), it is frequently used in baking and cooking. Coconut oil does wonders to soften and hydrate the skin.



Fig 2. Coconut

Sunflower oil: is a non-volatile oil derived from the seeds of *Helianthus annuus*, a member of the *Asteraceae* family. Lecithin, tocopherols, carotenoids, and waxes are all present in sunflower oil. It is non-comedogenic and has smoothing qualities. A straightforward yet affordable oil that has stood the test of time in a variety of emulsions designed for face and body products.



Fig 3. Sunflower

Jojoba oil: It is a blend of long-chain, linear liquid wax esters that were taken from the seeds of the *simmondsia chinensis* plant, a desert shrub in the *simmondsiaceae* family. Jojoba oil is frequently used in cosmetics as a moisturiser and as a carrier oil for exotic perfumes since it is simple to refine to remove any odour, colour, and stability against oxidation. Jojoba oil and human sebum are nearly equivalent. Sebum hydrates and protects the skin and hair, but it is removed by chemicals, pollutants, the sun, and ageing, leading to dry skin and hair.

Jjoba oil replenishes lost nutrients and returns the pH balance of skin and hair to its normal state.



Fig 4. Jjoba

Olive oil: It is a fixed oil made from the fruits of the *Olea europaea* plant, which belongs to the *Oleaceae* family. Trilinolein, triolein, tripalmitin, tristearate, monostearate, triarachidin, squalene, -sitosterol, and tocopherol are the main components. In cosmetics like lotions, shampoos, and other products, it serves as a skin and hair conditioner. It is a strong promoter of fatty acid penetration.



Fig 5. Olive

Aloevera: Aloevera, a kind of medicinal plant in the *Liliaceae* family, is exclusively found in cultivation; it does not grow natively, however closely related aloes are present in northern Africa. Due to its ability to cure, moisturise, and soften skin, it is a common ingredient in cosmetic products. To obtain the calming gel, simply chop an aloe vera leaf. Leucine, isoleucine, and other amino acids are found in aloe vera, along with saponin glycosides that have cleaning

properties, vitamins A, C, E, and B, choline, folic acid, and vitamins B12 and B12 that have antioxidant properties [36].



Fig 6. Alovera

Antiaging:

Rhodiola rosea-Rhodiola rosea:

It is also referred to as roseroot, arctic root, king's crown, *lignum rhodium*, orpin rose, and golden root. It is a species of plant from the *Crassulaceae* family that lives in frigid climates. Traditional folk medicine used *R. rosea* to increase physical endurance, work productivity, longevity, resistance to high altitude sickness, and to treat fatigue, depression, anaemia, impotence, gastrointestinal disorders, infections, and nervous system disorders. It grows primarily in dry sandy ground at high altitudes in the arctic regions of Europe and Asia. Phenolic chemicals, which are known to have potent antioxidant capabilities, are abundant in *R. rosea*.



Fig 7. Rhodiola rosea-Rhodiola rosea:

Carrot: It is obtained from the plant *Daucus carota* belonging to family Apiaceae. It is a valuable herb since ages as due to its richness in Vitamin A along with other essential vitamins. Carrot seed oil is used as anti-aging, revitalizing and rejuvenating agent. The carrot gets its characteristic and bright orange colour from β -carotene, and lesser amounts of α -carotene and γ -carotene. α and β -carotenes are partly metabolized into vitamin A in humans [37].



Fig 8. Carrot

Ginkgo: The leaves and nuts of the Ginkgo biloba (*G. biloba*) tree have been used for thousands of years in China and Japan to cure a variety of medical ailments, such as impotence in men and poor blood circulation, hypertension, poor memory, and depression. It is also establishing a similar reputation as an anti-inflammatory and antioxidant. Ginkgo biloba is a member of the very sized Ginkgoaceae family. The flavone glycosides found in the *G. biloba* extract EGb 761, which is made from the tree's leaves, are mostly derivatives of quercetin and kaempferol (33%), and terpenes (6%), which have demonstrated the ability to be isolated from the leaves of *L. inermis* and have demonstrated a significant antifungal antibiotic effect.



Fig 9. Ginkgo

Neem: Neem or Margosa is a botanical relative of mahogany. It belongs to the family Meliaceae. The Latinized name of Neem *Azadirachta indica* is derived from the Persian. **Azad=Free, dirakht=Tree, i-Hind=of Indian Origin.** The common treatment for the dandruff is Neem as it produces antifungal, antibacterial, pain-relieving, and anti-compounds that would treat dandruff [38].



Fig 10. Neem

Ideal Characteristics:

1. It should give shiny and smooth appearance free from sweating
2. It should be non-irritant and non-toxic to the lips
3. It should not dry on storage
4. The container should operate easily
5. It should impart uniform colour to the area of application
6. It should be free from gritty particles
7. It should not melt or harden within reasonable variation of climatic temperature.[15,16]

Advantages Of Herbal Lipstick Over Synthetic Lipsticks:

- The ingredient in the natural lipstick is all natural and is safe to use.
- They also contain natural nutrient that keep lips healthy.
- They have fewer or no aspect impacts.
- They are non-toxic, highly lipophilic, anti-oxidants, anti-microbial, anti-inflammatory, and are used in leucoderma of lips.
- Extensive range of color to choose from.
- Colorants has different original shades of color from purplish red, ruby red, beetroot purple, dark violet, pastel red, pale red, purplish red, rose red, deep magenta, dark purple, orange, deep violet.

- Different combination and shades can be obtained from these colors.
- By adding organic and inorganic acids and bases color may be changed to different shades.[17]

Composition:

1. Wax mixture,
2. Oil mixture,
3. Bromo mixture,
4. Colours,
5. Preservatives
6. Fragrance • Antioxidants,
7. Surfactants and other additives[18].

Manufacturing Of Lipstick:

Steps involved is:

Melting

|

Mixing

|

Moulding

|

Labelling

|

Packing. [19].

Types Of Lipstick:

Depending on the consistency, the solid lipstick is presented in ways that are lipstick stick, lipstick pencil, lipstick cream and liquid lipstick. Depending on the how much the secondary function, lipsticks are classified as;

- Moisturizing lipstick: It contains many moisturizing ingredients and most have SPF, protecting against Ultrasound radiation.
- Lipstick Nutritive: This type of lipstick is perfect for winter because it protects the lips against the cold.
- Lipstick Hygiene or treatment lipstick: It soothes the delicate skin on the lips, heals cracking, prevents herpes, and gives softness, natural shine. □ Depending on the how much to finishing, the lipstick are; □ Mattel has gloss and glitter and thick consistency.
- Satin are semi-opaque, have a slight stain sheen, are well pigmented and the texture is slightly silky.
- Amplified cream are creamy, have a slight sheen, they are well pigmented and the texture is quite creamy.

- Cremensheen are the cream base, are quite hydrated, pigmentation is medium to high and the anhydrous texture is quite silky.
- Frost is the lipsticks with a profusion of glittering particles, commonly called sparkling.
- Lustre is semi-glossy, has a slight pigmentation and a wet texture, similar to a gloss but is not vicious.
- Dazzles have gloss and glitter and a thick consistency.
- Glaze they are translucent, bright, and have low pigmentation. □ Depending on the how much the special features, the lipsticks are; □ Long-lasting lipstick- They stand for 8 to 24 h.
- Lipstick flavouring.
- Lipstick waterproof - It is a substance formulation resistant to water, allowing the lipstick not to go out of contact with it. Depending on the how much colouring, the lipsticks are;
- Colourless lipstick.
- Lipstick with neutral colours.
- Lipstick with vibrant colours.[20,21,22,]

Mechanism of lipstick:

A cup with a cup body holding a lipstick bullet nosepiece for containing and controlling the movement of the cup is part of a lipstick swivelling mechanism. With helical guiding grooves developed on its inner surface, the spiral that rotatably connected the nosepiece also had a screw that was detachably attached to the cup. On the exterior of the screw are created doublehelical protrusions. The screw and the cup move higher or downward when the spiral is turned because the double-helical protrusions are received in and guided by the helical guiding grooves inside the spiral[23].

The Problem With Conventional Lipstick:

Lip issues can cause ulcers, blisters, cracking, pain, numbness, and swelling. Lip symptoms can have a wide variety of reasons, which range from minor to major. Depending on the origin, the length and progression of lip symptoms varies greatly. Lip issues originate from trauma, such as biting the lips or burning them with hot food. The signs of a lip infection can even be prevalent. Lips-related symptoms might be related to diseases or disorders that affect the nerves and muscles, such as nerve injury or neuropathy. Additionally, cold and dry conditions, infections, dietary deficits, or pharmaceutical side effects may cause lip problems. Locally acting on the lips, calming, anti-irritant, skin-protecting, keratolytic, steroid, antibiotic, and skin

protectant medications are good drug choices for medicated lipsticks[24,25].

The majority of common lipsticks are produced with synthetic materials. These include substances that are harmful to the body and skin. Synthetic colours, heavy metals, and methylparaben are some of the ingredients to avoid. Unfortunately, metals like lead may not be included on labels because they frequently end up in cosmetics as impurities. But according to research done by the Food and Drug Administration (FDA), many cosmetics from the top American brands contain lead[26].

Noxious Lipstick Issues:

Lipstick has a fascinating history and a distinct market, but it also has some hazardous flaws. According to recent research, the lipstick carries trace amounts of lead and other heavy metals including antimony, arsenic, and cadmium that can be lethal or create major health issues because they are ingested by people and can cause cancer. [27] Such lip care products can lead to allergic reactions, with allergic touch cheilitis of the vermilion edge of the lip—which may be acute or chronic—causing the most severe of these. [28]

Anatomy Of Lips:

Humans have soft, flexible lips in their mouths, which aid in communication and food intake. The upper and lower lips are referred to as "Labium superius ores" and "Labium inferius ores," respectively. The vermilion zone is the reddish area inside the vermilion border, which is the point where the lips meet the surrounding smooth skin. The top lip's vermilion border is known as the Cupid's bow. A tubercle is the fleshy protrusion in the middle of the top lip. [29]

The lips function as a prehension, suction, and speaking organ. The margins of the lips are covered with dry, red mucous membrane that is continuous with the skin and contains numerous vascular papillae and touch corpuscles. It is made up of the skin, superficial fascia, orbicular, a muscle, and the muscles inserted around it (areolar tissue and mucous membrane). The mucous membrane produces superior and inferior folds in the median line and is internally reflected from the upper and lower lip onto the gums. The coronary arteries that completely encircle the buccal orifice close to the free margin of the lips are found in the areolar tissue or submucous layer. The face region gives rise to the coronary arteries. The superior coronary is larger than the inferior and anastomoses with its fellow of the opposite side and gives off a small artery to the septum arteriale septi nasi. Compression of this artery will sometimes control nasal haemorrhage. The

nerve supplying the lower lip is derived from the mental foramen and sends large twigs to the mucous membrane, the integument, and the fascia of the lip and chin. Some of the lymphatic vessels of the lips pass to a gland just above the body of the hyoid bone, while others pass to the submaxillary glands. The labial glands are in the submucosal layer of the lips around the orifice of the mouth. They secrete a mucous fluid. Mucous retention cysts develop when the ducts of these glands become occluded [30,31].



Fig 11. Anatomy Of Lip

Quality Control Of Lipstick:

quality assurance Since the product must adhere to Food and Drug Administration (FDA) standards, procedures are stringent. Due to the rigorous regulations placed on the production process and materials, lipstick is the only cosmetic that is consumed. In order to ensure that lipstick is contamination-free, it is combined and processed in a controlled setting. To make sure that the incoming material matches the necessary specifications, it is tested. Every batch that is made has samples that are saved and kept at room temperature for the duration of the product. Lipstick colour control is important, and one only needs to look at the manufacturer's selection of colours to realise this. The colours of lipstick are controlled numerically using colorimetric technology. When blended, this apparatus provides a numerical reading of the colour so that it can perfectly match the remaining lipsticks. The heat test and the rupture test are two additional testing for lipstick. The lipstick is placed in a holder and heated at a continuous temperature of 130 °F (54.4 °C) for 24 hours to conduct the heat test. The lipstick shouldn't droop or be distorted in any way. The lipstick is positioned in two holders that are expanded during the Rupture test. At intervals of 30 seconds, weight is gradually added to the holder on the lipstick portion until the lipstick ruptures. The pressure required to rupture the lipstick is then checked against the manufacturer's Standards. Since

there are no industry standards for these tests, each manufacturer sets its Parameters.[32,33,34,35]

Global Market:

Overview:

The global lipstick market size was valued at USD 11.5 billion in 2018. Rising consciousness regarding personal grooming and appearance among young female consumers across the world is expected to be one of the key drivers. Furthermore, increasing purchasing power of the women population due to rising female workforce is expected to fuel the product’s demand in the near future.

Market Summary
CAGR 7.23%

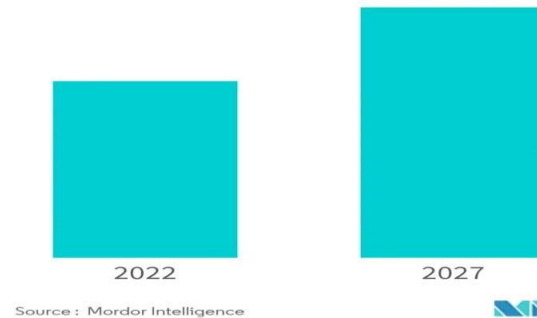


Fig 13

Lip powder has become incredibly popular all around the world in recent years. The market has been driven by this product's lightweight and matte finish. One of the main factors influencing product demand is the inclusion of hydrating ingredients including coconut oil, glycerin, and vitamin E. Additionally, it lasts longer than typical lipsticks. Customers are curious to try out different lip colours and textures. Color trends vary depending on geography and skin tone. Imperfect lip tints that practically smear into the lip line are becoming more and more fashionable in western nations like North America and Europe. Similar to how some hues have been in high demand all across the world are pink, peach, and nude.

II. CONCLUSION

The usage of cosmetics by women has significantly increased during the past few decades. However, the dangers posed by these compounds have only recently gained attention. After extensive clinical trials, consumers can use herbal lipsticks in a safe and efficient manner. Natural cosmetics are safer to use than other cosmetics. Synthetic colouring compounds have been shown to be carcinogenic and can trigger allergic reactions. Accurate component knowledge, body Prakriti assessment, individual needs, consumer impression of the product, and benchmark product influence your capacity to desire the proper cosmetics for you. The ability and safety of herbal cosmetic products call for strict quality control. Therefore, tests for quality control must be done on herbal cosmetics. Longer spans of time are considered to be secure.

U.S. lipstick market size, by applicator, 2015 - 2025 (USD Billion)

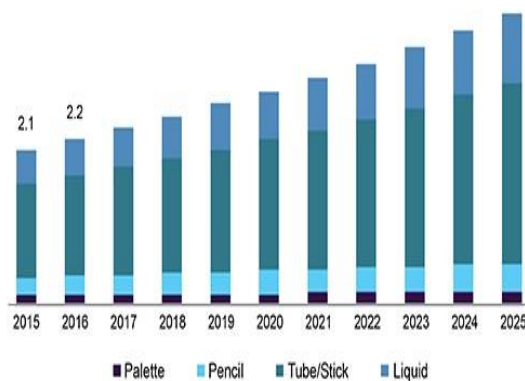


Fig 12

To learn more about this report, request a free sample copy. Rising health consciousness among the consumers and awareness about the benefits of organic cosmetics are fueling the demand for natural and organic lip color products. Presence of high anti-oxidant in natural and organic products helps in repairing skin cell’s damage. This beneficial feature is expected to prompt the product’s consumption in the near future. Companies including Antipodes and Origins Natural Resources, Inc. launched natural and flower based lip colors in 2018.

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