



Review on natural lip balm

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Abstract

Cosmetics are incredibly in demand since historical time. These days focus shifted more towards naturally derived cosmetic products. Among all cosmetic products, lip balm formulations are most widely used to enhance the beauty of lips and add glamour touch to the makeup. Lip balms offer a natural way to maintain and promote healthy lips. Current cosmetic lip products are based on use of enormous chemical ingredients with various side effects. Hence in this work, an attempt has made to study natural ingredients used to formulate natural lip balm. This article reviews on the essential ingredients used for natural lip balm along with their merits and limitations. The natural lip balm can made using naturally occurring base, oils, extract, colour and flavouring agents which can be evaluated for their resistance to temperature variations, pleasant flavour, and smoothness during application, adherence and easy intentional removal, etc.

Keywords: Natural lip balm, herbal cosmetics, natural ingredients

Introduction

Cosmetic plays a significant role in today's life style. Moreover, current trend is going green in almost all industries including cosmetics to adopt more natural way of life. The preferable choices are natural food, herbal medicines and natural curing practices for healthy life and also there is much demand for the organic vegetable products. The usage of herbal cosmetics has been increased to many folds in personal care system [1]. Natural products have been used for folk medicine purposes throughout the world for thousands of years. Many of them have pharmacological properties such as antimicrobial, anti-inflammatory and cytostatic effects. They have been recognized as useful for human medicine [2]. Herbal extracts are cultivated all over the world and is prime name in horticulture sector. Cosmetics made up of herbal extracts for skin care and hair-care are very popular for their reliability [3-5]. Herbal cosmetic products include various formulations. The word herbal indicates safety as compared to synthetic products which are having various adverse effects on human health [3-7]. Colouring lips is the ancient practice to enhance the beauty of lips and to give glamour touch to the face make up. For this the choice for shades of colour, textures, lusters have been changed and became wider. This can be observed from the lip jelly, lip balm, lipstick marketed in hundreds of sheds of colours to satisfy the demand [8]. This work was intended for extensive study of natural lip balm. This was based on the comprehensive literature search of natural lip balm, significance of natural excipients along formulation and evaluation of lip balm. These products are evaluated for organoleptic properties like colour, Odor, spread ability, pH, melting point, skin irritation and product consistency [8-10]. The colour of a product also provides an indication of product quality and freshness. Natural colours are however, less toxic compared to synthetic colours [11].

Anatomy of lips

The lips serve as organs of prehension, suction and speech. It is composed of the skin, superficial fascia, orbicularis

muscle and the muscles inserted around it (areolar tissue & mucous membrane). The margins of the lips are covered with dry, red mucous membrane, continuous with the skin and containing numerous vascular papillae and touch corpuscles. The mucous membrane internally is reflected from the upper and lower lip upon the gums, and in the median line forms two folds of superioris and inferioris [10, 12]. The areolar tissue or submucous layer contains the coronary vessels which completely encircle the buccal orifice near the free margin of the lips. The coronary vessels are the superior and inferior coronary arteries which arise from the facial. 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 arteriaseptinasi. Compression of this artery will sometimes control nasal haemorrhage [12]. The superior labial or coronary vein begins as a plexus in the orbicular is muscle of the upper lip, passes with the coronary artery and drains into the facial vein a little below the alae of the nose of the veins which drain the lower lip the inferior coronary empties into the facial a little below the superior labial; but the chief branch from the lower lip descends as a rule to the submental vein, thence to the facial or often to the anterior jugular [9, 10, 12]. The nerves supplying the lower lip are derived from the mental which emerges from the bone through 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 sub maxillary glands. The labial glands are in the submucous 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 [12].

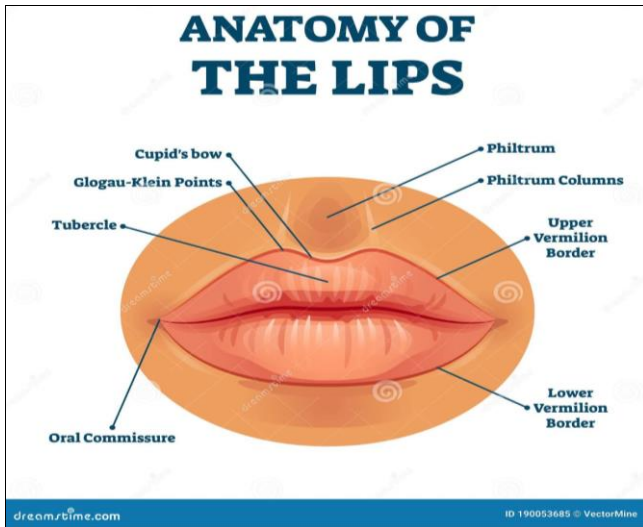


Fig 1: Anatomy of Lips

Advantages of Natural Lip Balm

Lip balms help to protect the natural health and beauty of the lips.

Sun block lip balms are proved to prevent ultraviolet rays from hurting the lips.

They are not gender specific products and both men and women can use them.

Lip balm products help to protect lips affected by cold sores, chapping and dryness.

Contact of the product with the skin will not cause a sensation of friction or dryness, and should allow the forming of a homogeneous layer over the lips in order to protect the labial mucous susceptible to environmental factors such as UV radiation, dryness and pollution.

It refreshed, renewed and also addresses lip-related symptoms resulting from colds, flu and allergies. g. The use of natural lip cosmetic to treat the appearance of the face and condition of the skin [15, 17-21].

Disadvantages of Natural Lip Balm

- a. Lip balms made of low-quality ingredients can harm the lips seriously. Such lip balms may dry out the lips instead moisturizing it.
- b. Lip balm addiction is another disadvantage usually seen with the use of them.
- c. Compared to commercially-prepared lip balms, homemade lip balms tend to stay on the lips for a shorter duration of time. Thus, need to reapply often.
- d. Some companies manufacture lip balms considering only the beauty aspect, ignoring the health benefits and soft character of the skin. Such products will gradually damage the natural colour, softness and glow of the lips.
- e. The naturally derived colours and flavours are more difficult to obtain and also have issues related to stability in the products [15, 17-21]

Application of Lip Balm

Lip balms are formulations applied onto the lips to prevent drying and protect against adverse environmental factors. Numerous lip balms of chemical origin are currently available in the market from companies like the body shop, Nivea, Himalaya, Blistex, etc. The cosmetic literature reports limited data on this type of formulation, although

references related to lipstick apply because it is a cosmetic form similar to lip balm. This similarity extends to include organoleptic and stability requirements such as resistance to temperature variations, pleasant taste, innocuousness, smoothness during application, adherence and easy intentional removal [14]. Lip balm should not be considered equivalent to the lip gloss, with the former being a product intended for use by both men and women [14 & 15]. To formulate lip balms, it is necessary to balance the concentration of the main ingredients including butters, oils and waxes and other excipients [15]. Many people seek weekly facials, daily skin scrubs, anti-aging lotions, and many other products to ensure they have healthy and glowing skin. But with all the attention being given to healthy skin, lip care is largely forgotten. Natural lip balms offer a natural way to maintain and promote healthy lips [15]. Lip balms are often eaten away by the user and hence it is imperative that health regulators have a microscopic look at the ingredients that go in to the lip balm. The dyes that contribute to the colour of the lip balm are dangerous to humans on consumption [16].

Table 1: Created lip balm's qualitative ingredients

No.	Component	Effectiveness of formulation
1.	Bees wax	Increase viscosity & melting point
2.	Coconut oil	Blending agent & Moisturizer
3.	Castor oil	Emulsifier
4.	Pomegranate extract	Colouring agent
5.	Vitamin E	Antioxidant
6.	Rose oil	Fragrance

Common Ingredients used in Natural Lip Balm Formulation

The list of materials used as key formulation ingredients for natural lip balm given in the Table no.2 as described below

Table 2

Base	Oils	Colouring Agent	Flavouring Agent
Cocca butter	Coconut oil	Beet root	Strawberry
Bees wax	Olive oil	Pomegranate	Honey
Shea wax	Almond oil	Marigold	Orange
Shea butter	Vitamin E oil	Tomato	Saffron
White bees wax	Peanut oil	Jabul	Raspberry
Yellow bees wax	Tea tree oil	Watermelon	Vanilla
Carnauba wax	Glycerin	Honey	Mango
Candelilla wax	Castor oil	Saffron	Rose oil
Mango butter	Jojoba oil	Turmeric	Sandalwood
Avacado butter	Corn oil	Capsicum	Jasmine
Olive wax	Arachis oil	Cherry	Cherry
Jojaba wax	Lemon oil	Orange	Apple
Olive butter	Avocado oil	Strawberry	Lemon
Sweet Almond butter	Sesame oil	Mango	Apricot
Sweet almond wax	Sunflower oil	Carrot	Rosemary
Raspberry butter	Grape seed oil	Lemon	Pineapple

Method of Lip Balm Preparation

The details of general method of lip balm preparation are described in this section. Select appropriate ingredients for lip balm formulation from Table number 1. Initially melt the accurately weighed number of waxes in hot water bath in descending order of their melting point with continuous stirring/heated till it melts completely [24]. Then coloring agent dissolved in oil or water depends on solubility and add to the mixture of melted waxes. Finally add flavouring agent

like honey, vanilla which are also act as a preservative and continuously stirred to get a homogenized mixture. The mixture should be stirred vigorously until a smooth emulsion form. Then, this mixture could be poured into clean and lubricated moulds and allow them to cool to achieve contraction of the waxes to facilitate easy removal of the balm [24 & 25]. Recently the work also patented on the preparation of botanical butter stick lip balm cosmetics [27].

Evaluation parameters for lip balm

Quality of a lip balm product can be assessed by the product performance. Therefore, significance of evaluation parameters of any product is abundant. It helps to maintain the stability along with the purity and uniformity of product. The main evaluation parameters of lip balm products are described in this section. The appearance of cosmetics products plays paramount role from consumer's perspective. This includes colour, odour and texture of the product [17]. By visualizing in 10x magnification under microscope colour and appearance can be characterized, while odour can be compared by the group of evaluators. The spread ability of lip balm can be tested by applying the formulated lip balm on glass slide at room temperature to observe uniformity in the formulation of protective layer and whether the stick fragmental deformed or broke during application for appropriate results of different formulation. The melting temperature and pH of lip balm are also commonly evaluated by capillary method and pH meter respectively. Ex-vivo and in vivo tests should be performed for skin irritation test. The product need to study for the surface anomalies such as formation crystals on surfaces or contamination by moulds, fungi etc. There should not be

sign of any surface defects. The lip balm products are evaluated for perfume and aging stability [18]

Organoleptic properties

The lip balm's sensory attributes, including its colour, scent, flavour, and overall appearance, were assessed.

Examining spreadability

To evaluate the regularity of the protective layer it formed, the product was repeatedly put on a glass slide during the spreadability test (conducted at room temperature). The test also sought to ascertain whether the lip balm stick fractured, deformed, or fragmented while being applied. For the test, the analyst defined the following criteria: G (Good): consistent and flawless application with no fragmentation or lip lubricant distortion. I (Intermediate): consistent application with minimal lip balm deformation and only a few pieces left behind. B (Bad): significant lip balm deformation, difficult or improper application, and numerous fragments left behind.

Measurement of pH

As the lip balm's pH level was about 7.2, or almost neutral, it is unlikely to irritate the lips.

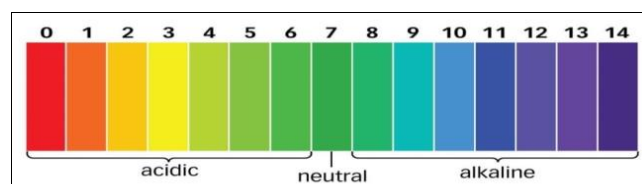


Fig 2: PH Scale

Table 3: Other Natural lip balms

Sr.No.	Natural Lip Balm	Content name	Part of plant	pH	Therapeutic uses
1	Formulation and evaluation of cherry	Cherry	Fruit	4.5	Moisturizing and refreshing.
2	Formulation and evaluation of Watermelon	Watermelon	Fruit	4 – 6.5	Thirst of Nourishment yor lips want to during both extreme temperatures.
3	Formulation and evaluation of Strawberry	Strawberry	Fruit	-	Make your lips natural pinkish tone and protect your lips from getting dry chapeau.
4	Formulation and evaluation of Papaya	Papaya	Fruit	5.5	Help hydrate and moisturize dry and chapped lips.
5	Formulation and evaluation of Citrus	Lemon	Fruit	4.6	That help to sooth irritation and inflammation of lips.
6	Formulation and evaluation of sweet orange	Orange	Fruit	-	Help to sooth and protect your lips from environment stressors.
7	Formulation and evaluation of Apple	Apple	Fruit	4.3	To manage, sensitive lips that get dry and irritate easily.
8	Formulation and evaluation of Alo vera	Alo vera	Leaf	-	Prevention and healing of cracked chapped sun-burnt and dry lips.
9	Formulation and evaluation of Berry	Berry	Fruit	-	Soothes and guards' tenders' lips.
10	Formulation and evaluation of Cocca butter	Cocca butter	Seeds	5.7	Adds a protective hydrating layer to lips helping protect them from extreme temperature and indoor heat that can leaves your lips dried out.
11	Formulation and evaluation of Cinnamon	Cinnamon oil	Leaf	2 – 3.4	Cinnamon lip balm Antioxidant power helps to prevent pre maturing and chapped lips.
12	Formulation and evaluation of Beet root	Beet root	Fruit	4 - 5	Help to getting rid of darker lips making your lips brighter and lighter.
13	Formulation and evaluation of Pineapple	Pineapple	Fruit	-	It can help to prevent potential inflammation and protect sensitive skin.
14	Formulation and evaluation of Mango	Mango	Fruit	--	Gives you soft and supple lips.
15	Formulation and Evaluation of Saffron/Kesar	Saffron/Kesar	Flower	-	Ideal for dry and sensitive lips and effectively repairs damage cells, in parting long-lasting moisturization.
16	Formation and evaluation of Jasmine	Jasmine	Flower	5.6	Deliver very good lip hydration and improve lip pigmentation.
17	Formation and evaluation of Rose	Rose pettle	Flower	6.5	Applied topically to moisturize chapped lips.

18	Formulation and Evaluation Meskmelon	Meskmelon	Fruits	-	It is used moisturize and hydrate the lips.
19	Formation and evaluation of Apricot	Apricot	Fruit	-	Make your lips look and feel perfect, completely organically.
20	Formulation and evaluation of Rosemary	Rosemary	Fruit	-	Nourishing and moisturizing effects, Helping to heal cracked and dry lips.
21	Formulation and evaluation of Cucumber	Cucumber	Fruit	-	Helps calm and soften dry, cracked lips.
22	Formulation and evaluation of Kiwi	Kiwi	Fruit	-	Acts as a natural emulsifier which help to retain moisture that's helpful for dry or chapped lips.
23	Formulation and evaluation of Almond	Almond	Seed	5.5 – 6.2	Insures even-toned lips if they are dark restricts dryness to insure soft and super-hydrate.
24	Formulation and evaluation of Tomato	Tomato	Fruit	-	Moisturizing and nourishing the lips, as well as providing antioxidant effect.
25	Formulation and evaluation of Raspberry	Raspberry	Fruit	3.2 – 3.9	Help shield your lips from harmful environmental factor, While promoted youthful and supple appearance.

Conclusion

Due to tremendous demands of beauty enhancing products cosmetics industry is flourishing. This work has reviewed the current status of natural lip balm products. This also studied all aspects of natural lip balm including natural ingredients, formulation methods, evaluation and applications. Hence it can be concluded that the extensive literature study has been performed on the natural lip balm products and shown wide scope for such products in future.

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