

Research Article

FORMULATION & EVALUATION OF HERBAL LIPSTICK USING *AMARANTHUS DUBIUS*Savalkar Monika. B ^{1*}, Shinde Nikita. L ², Shinde Pradnya. R ², Kanase Poonam. B ²^{*1} Assistant Professor Gourishankar Institute of Pharmaceutical Education and Research, Limb, Satara- 415015, Maharashtra, INDIA.² Gourishankar Institute of Pharmaceutical Education and Research, Limb, Satara- 415015, Maharashtra, INDIA.

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ABSTRACT

Cosmetics are incredible in demand since historical time till day. Lipstick formulations are most widely used to enhance the beauty of lips and add glamour to touch to the makeup. With this aim, an attempt was made to formulate herbal lipstick by using natural coloring pigments of *Amaranthus dubius* [Amaranthaceae] Stems and the lipstick were evaluated for the organoleptic properties such as spreading, shine and gloss and found to be a satisfactory product to give attractive beauty.

KEYWORDS: *Amaranthus dubius*, Herbal lipsticks, Olive oil, Bees wax, Herbal cosmetics.

INTRODUCTION

Cosmetics are substance or products used to enhance the appearance or fragrance of the body. Many cosmetics are designed for use of applying to the face and hair. They are generally mixture of chemical compounds. Some being derived from natural sources such as castor oil. Common cosmetics include Lipstick, Mascara, Eye shadow, Foundation, Skin cleanser and shampoo. Cosmetics applied to the face to enhance its appearance are often called makeup. Cosmetics are products designed to cleanse, protect and change the appearance of external parts of our bodies [1-5].

Lipstick is cosmetics product containing pigments, oils, waxes, and emollient that apply color, texture, and protection of the lips. Many colors and types of lipstick exist. Some lipsticks are also lip balms, to add color. Although the name originally applied to material, within a tubular container, usually around 10 mm in diameter and 50 mm length. *Amaranthus dubius* is a coloring agent used as lipstick. *Amaranthus* collectively known as *amaranth*. *Amaranthus* shows a wide variety of morphological diversity among and every within certain species. The family of *Amaranthus dubius* is 'Amaranthaceae'. It is a easily harvested. Its seeds are a good source of protein. In cooked and edible forms, amaranths retain adequate content of several dietary minerals [6-8].

Amaranth species are cultivated and consumed as a leaf vegetable in many part of world. Four species of *Amaranthus dubius* cultivated vegetables in eastern asia; *Amaranthus cruentus*, *Amaranthus blitum*, *Amaranthus dubius*. Lipstick is a cosmetics product containing pigment, oil, waxes, and emollient that applies color, texture, and protection of the lips. Coloring skin particularly skin of face and lips is an ancient practice going back to prehistoric period. In present days the use of such product has increased and choice of shades of color, texture and luster have been changed [9-11].

The word herbal is a symbol of safety in contrast to the synthetic one which has adverse effect on human health. Herbal preparation viz, herbal tablet, herbal tonic, herbal paste, herbal shampoo, herbal sindur, herbal contraceptives, and herbal lipstick has become popular among the consumer herbal medicines represent the fastest growing segment to heal the various ailments [12-14].



Fig. 1: Figure of Organic Colour Lipstick



Fig. 2: Figure of Natural Colour Lipstick

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MATERIALS AND METHODS

Subfamily : Amaranthoideae

Amaranth Dubius:**Using Amaranthus in Cosmetics:**

The flowers of the 'Hopi Red Dye' amaranth were used by the Hopi (a tribe in the western United States) as the source of a deep red dye. Also a synthetic dye was named "amaranth" for its similarity in color to the natural *amaranth* pigments known as betalains. This synthetic dye is also known as Red No. 2 in North America and E123 in the European Union.

Fig. 3: Figure of *Amaranthus dubius***Amaranthus Profile:**

Synonym : *Amaranthus*
Kingdom : Plantae
Clade : Angiosperm
Genus : *Amaranthus* Linn
Order : Caryophyllales
Family : Amaranthaceae

Biological Source: Spleen Amaranth is a plant species .It belongs to economically important family Amaranthaceae.

Geographical Source: The plant is native to South America and was introduced to Asia, Europe and Africa. In Tamilnadu the plant is known as Araikeerai.

USES: Amaranth leaves in general are recommended as a good food with medicinal properties for young children, lactating mothers and for patient with fever.

Collection and authentication of herbs of plant material: The herbs used in the formulation of herbal lipstick were collected in the month of October 2017 from the Local market satara. Authenticated by Dr. Karande. V.C. Head Department of Botany, Y.C. College, Shivaji University, Satara, Maharashtra.

Fig. 4: Figure of *Amaranthus dubius* Plant

Table No. 1: Excipients of Lipstick

S. No.	Name of Ingredient	Name of supplier
1	Olive Oil	College lab
2	Cetyl Alcohol	College lab
3	Lanolin	College lab
4	Carnuba Wax	College lab
5	Bees Wax	College lab
6	Amaranth color	Purchasing & Prepared in college lab
7	Antioxidant	College lab
8	Perfume	College lab
9	Rose essence	College lab

Extraction of Amaranthus dubius:**Maceration Method:**

Place about 5.0 gm of coarsely powdered air- dried material, accurately weighed, in a glass stopper conical flask. Macerate 100 ml of the ethanol solvent specified for the plant material concerned for 8

hours, shaking frequently, then allow to stand for 12 hours. Filter rapidly taking care not to lose any solvent, transfer 25 ml of the filtrate to tared porcelain dish and evaporate to dryness on a electric water bath. Dry and cool in refrigerator for 15 minutes and use the preparation.

Formulation of herbal lipstick:

Table No. 2: Shows that the composition of formulations F1-F3

INGREDIENTS	F-1	F-2	F-3
Olive oil	6.5	6.5	6.5
Carnuba Wax	1	1	1
Bees wax	1.5	1.5	1.5
Lanolin	2	1	1.5
Cetyl alcohol	0.5	0.5	0.5
Amaranth Extract	1ml.	3ml.	5ml.
Rose essence	0.01ml	0.01ml	0.01ml

Colour pest was prepared by using olive oil and *Amaranth* color. All the waxes like a carnauba wax, bees wax were arranged in the increasing order of their melting point. Waxes were melted and the color pests along with the lanolin were added in the melted wax melting point. After lowering the temperature perfume were added in the mixture. This molten mass was poured in prelubricated mold and kept in the refrigerator for 15 minutes lipstick were removed from the moulds and fixed in to container.

Evaluation of herbal lipstick:

It is very necessary to maintain a uniform standard for herbal lipstick, keeping this view in mind the formulated lipstick was evaluated on the parameters such as melting point, breaking point, force of application, surface anomalies etc.

Melting point:

Determination of melting point is important as it is an indication of the limit of safe storage. The melting point of formulated lipstick was determined by capillary tube method, the capillary was filled and keep in the capillary apparatus and firstly observed the product was slowly-slowly milted. After sometimes observed product was completely melted. The above procedure was done in 3 times and the melting point ratio was observed in all formulation.

Breaking point:

Breaking point was done to determine the strength of lipstick. The lipstick was held horizontally in a socket inch away from the edge of support. The weight was gradually increased by a specific value (10gm) at specific interval of 30 second and weight at which breaks was considered as the breaking point.

Force of application:

It is test for comparative measurement of the force to be applied for application. A piece of coarse brown paper kept on a shadow graph balance and lipstick was applied at 45° angle to cover a 1 sq. Inch area until fully covered. The pressure reading is an indication of force of application.

Surface anomalies:

This was studied for the surface defects, such as no formation crystals on surfaces, no contamination by moulds, fungi etc.

Aging stability:

The product was stored in 40°C for 1 hrs. Various parameters such as bleeding, crystallization of on surface and ease of application were observe.

Skin irritation test:

It is carried out by applying product on the skin for 10 min.

RESULTS AND DISCUSSION

The present work formulation and evaluation of herbal lipstick was aimed to formulate a lipstick using herbal ingredients with a hope to reduce the side effects as produced by the available synthetic ones. The prepared formulation [Table No -1] was evaluated [Table No-2] and it was found that the herbal lipstick **Batch F-3** was best among the three formulations.

Table No. 3: Shows that the result of formulations F1-F3

Evaluation parameter	F1	F2	F3
Color	Faint pink	Faint pink	Dark pink
Skin irritation test	No	No	No
Melting point	60-61	59-60	61-63
Breaking point	27	30	27
Force application	Easy	Easy	Good
Perfume stability	+	+	++
Surface anomalies	No defect	No defect	No defect
Aging stability	Smooth	Smooth	Smooth

CONCLUSION

This research provides guidelines on use of herbal ingredients in preparation of lipsticks having less or no side effects. The natural ingredients like Olive oil, Amaranth Extract were used in the preparation of herbal lipsticks. The prepared lipsticks were show excellent properties like spreading and smoothness of lips.

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