

Formulation and Evaluation of Herbal Lipstick using Lycopene Extracted from Citrullus lanatus

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Abstract: *The major objective of the study was to extraction of citrullus lanatus. Cosmetics are the demand of incredible from ancient times. Lipstick formulations are used to the enhancement of the beauty of lips these are the cosmetic product which contains pigments, oil, waxes, and emollients that apply the color and protection to the lips. Cosmetics are substances it is used to increases the fragrance of the human body. These include skincare creams, lotions, powders perfumes these are a wide range of herbal cosmetics in contrast to synthetic herbal cosmetics that are safe for human health. The adverse effects can be Reduced by using natural color extract from watermelon (citrullus lanatus) is a natural source.*

Keywords: Herbal lipstick, Formulation, Evaluation, Cosmetics

I. INTRODUCTION

Cosmetics are substances it is used to increases the fragrance of the human body. These includes kincare creams, lotions, powders perfumes these are a wide range of herbal cosmetics in contrast to synthetic herbal cosmetics that are safe for human health.

[1]. A large number of cosmetic and toiletry formulations have been formulated based upon Indian herbs recently. Indian herbs have also been used in personal care products in certain modern studies, in addition to historically documented applications. Herbal medicine is in high demand due to its skin-friendliness and minimum adverse effects. The greatest thing about herbal cosmetics is that they are entirely composed of shrubs and herbs and so have no adverse effects on the human body; instead, provides the body with nutrients and other useful minerals.

[2]. Lipstick is the most widely used cosmetic added in makeup to enhance the beauty of lips. A good lipstick should have convincing qualities that make it attractive to customers, such as a decent texture and antioxidant benefits. Bases, oils, emollients, and colorants are just a few of the many ingredients that go into making good lipstick. The characteristics of the lipstick are texture, melting point, and hardness, which are adjusted by modifying the ratio of the components used in the formulation.

[3]. Natural cosmetics are suitable for all skin types. No matter if you are dark or fair, you will find natural cosmetics like foundation, eye shadow, and lipstick which are appropriate irrespective of your skin tone for women with an oily or sensitive skin conditions. Coal tar a color whether produced from coal tar or synthetically can cause cancer.

[4]. Carotenoids are a group of naturally occurring pigments that include lycopene. Lycopene is the natural constituent of red fruits and vegetables and certain algae and fungi. Watermelons are the major sources of lycopene in the human diet. In analogy to other carotenoids, lycopene occurs in various geometrical configurations. Lycopene present in fresh watermelon, tomatoes consist predominantly of all-trans lycopenesynthetic. Lycopene is produced by witting condensation of synthetic intermediates that are also used in the production of other carotenoids used in food. When exposed to oxygen and light, lycopene becomes unstable. Synthetic lycopene is stored in lightproof containers in nitrogen or other inert gas to ensure optimal stability. Commercial lycopene preparations for use in food are stabilized with antioxidants and prepared as suspensions in edible oils or water-dispersible powders. Synthetic lycopene is intended for use in a wide range of foods at levels from 2 to 130 mg/kg .

[5]. Colorants, also known as pigments, are key components in lipstick formulation since they define the lipstick's aesthetic value. Colorants can be from synthetics and natural sources synthetics colors are manufactured chemically .

[6]. Watermelon (Citrullus lanatus) is a scrambling and trailing vine in the flowering plant family Cucurbitaceae. The species is said to have originated in southern Africa, andthere is evidence that it was cultivated in Ancient Egypt. It is

produced in tropical and subtropical regions all over the world for its huge edible fruit, sometimes known as a watermelon, which is a type of berry with a hard skin and no internal division, botanically known as a pepo. Although seedless varieties have been grown, the sweet, juicy flesh is normally deep red to pink, with abundant black seeds. The fruit can be eaten raw or pickled and the rind is edible after cook.

[7]. Nowadays, in the whole world, there is a turn to return towards the use of herbal products and to adopt the more natural way of life. People prefer natural food, herbal medicines, and natural curing practices for a healthy life; there is much craze for the vegetable products cultivated through biological/organic farming without using synthetic fertilizers and pesticides. In the personal care system, the use of herbal cosmetics has increased considerably, and there is a high demand for herbal .

Taxonomical Classification of Watermelon

Kingdom	Plantae
Division	Magnoliophyta
Class	Magnoliopsida
Order	Cucurbitales
Family	Cucurbitaceae
Scientific Name	Citrullus lanatus
Synonyms	Citrullus vulgaris
Genus	Citrullus

Health Benefits of Watermelon

1. Watermelon consumption increases free arginine, which can help maintain cardiovascular function.
2. Eating watermelon can help maintain cardiovascular health.
3. Watermelon has amino acids that help maintain the arteries.
4. Watermelon amino acids can help maintain blood flow and heart health.

II. MATERIALS AND METHOD

2.1 Materials

Watermelon (extraction of lycopene), Bees Wax, Paraffin oil, Castor oil, Ethanol (solvent) for extraction process, Lycopene (coloring agent).

2.2 Method

Isolation Procedure for Lycopene from Watermelon Pigment extraction was accomplished by homogenizing an equal mixture of fruit pulp and solvent (1/1 w/v) (Figure 1). Under ice-cold conditions, 100 g of peeled, watery fruit was agitated and macerated for 15 minutes with 100 ml solvents (EtOH, aqueous ethanol 50:50). The aqueous liquid was centrifuged at 18,000 rpm and 4C for 20 minutes, then immediately filtered through nylon mesh. Ethanol is a type of ethanol.



Fig. 1. Extraction of lycopene from watermelon.

2.3 Methods of Preparations

- 4 gm of beeswax was weighed accurately, and it was taken in a 50 ml beaker then it was melted by keeping on water-bath.
- 0.4 ml of paraffin oil was added to it 5 ml of castes oil and 10, 20, and 40 mg of lycopene were measured and added to the mixture it was stirred continuously for about 2 min.to convert into a viscous paste.
- A mould was taken and in its inner surface little amount of castor oil was applied for lubrication. Then the viscous preparation was added quickly into the mould and it was then kept in the refrigerator .
- Finally, the lipstick was removed from the mould and various parameters were judged

Table no.2 Composition of different ingredients used for the preparation of herbal lipstick.

Sr.No.	Ingredients	Quantity given	Quantity taken	Use of Ingredients
1	Carnauba wax	10.0g	0.4g	Emulsifying agent
2	White bees wax	20.0g	0.8g	Emulsifying agent
3	Lanolin	5.0g	0.2g	To adhare
4	Castor oil	50.09g	2g	Plastitizer
5	Isopropyle myristate	5.0g	0.2g	Wetting agent
6	Cetyl alcohol	5.0g	0.2g	Emollient
7	Liquid paraffin	2.0g	0.08g	Lubricant
8	Titanium Dioxide	3.0g	0.12g	Intensity colour
9	Colour	Q.S	Q.S	Colouring Agent
10	Perfumes	Q.S	Q.S	Flevouring Agent
11	Butyl Hydroxide tolene & Aniline	0.05%	0.002%	Preservative



Formation 1.

Formation 2.

Formation 3.

Figure:-Formulation of herbal lipstick

III. EVALUATION TEST OF LIPSTICK

Lipstick is evaluated on different parameters.

1. Color of lipstick: The color of the prepared lipstick was observed in the board daylight and found to be Orange-Red in color.
2. 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 the capillary tube method. The capillary was filled kept in the capillary apparatus and first observed that the product was slowly melted after sometimes the product was completely melted.
3. Force of application: It is test for comparatively measurement of the force to be applied for application. A piece of coarse brown paper can be kept an a shadow graph balance and lipstick can be applied at 45° angle to cover 1 sq. Inch area until fully covered. The pressure reading in an indication of force of application
4. Surface anomalies: This is studied by the surface defects, such as no any formation of crystals on the surface and no contamination by mould, fungi etc.
5. Aging stability: The product was stored at 40°C at 1hrs. Various parameters such as bleeding, crystallization on the surface and ease of application were observed.
6. Solubility test: The formation of herbal lipstick was dissolved in various solvents like acetone, hexane, petroleum ether, water, alcohol etc. & the solubility was observed.
7. Breaking point: The breaking point test is to determine the strength of lipstick place lipstick horizontally in a socket inch away from the edge of support. Increases the weight by specific values (10gm) at a specific interval of 30 seconds and weight at which breaks in considered as the breaking point.
8. pH parameter: The pH of formulated herbal lipstick was determined using standard pH paper.
9. Skin irritation test: It is carried out by applying the product to the skin for 10 min.
10. Spreading Coefficient: Take a lipstick these apply to the spreader then apply to the weight and check spreading coefficient by using scale.
11. Perfume stability: Perfume stability can also be assessed by storing lipsticks in the oven at 40°C and by making the periodic comparison of perfume with fresh lipstick.

IV. RESULTS AND DISCUSSION

Different natural ingredients were used in the formulation of herbal lipstick that contains the coloring agent like lycopene obtained from watermelon (*Citrullus lanatus*). The lipstick was evaluated to the various parameters. Hence from the above evaluation parameter it was concluded that the formulation of herbal lipstick shows minimal /no side effect and thus showing maximal l

Table no.3

S.N.	Evaluation	F1	F2	F3
1	Color	Faint-orange	Orange	Orange-Red
2	pH	4	4	3
3	Melting point	61-63° C	65-66° C	62-65° C
4	Solubility-Acetone, Alcohol	Soluble	Soluble	Soluble
5	Ageing stability	Smooth	Smooth	Smooth
6	Breaking point	18 sec	20sec	25 sec
7	Force of application	Good	Good	Good
8	in irritation test	No	No	No
9	Spreading Coefficient	4.2 cm	5.5 cm	5.9 cm
10	Perfume stability	Good	Good	Good
11	Surface anomalies	No	No	No

V. CONCLUSION

The research it was concluded that the use of natural colors in lipstick formulation having no or minimum side effects. Natural ingredients like castor oil, beeswax, etc. were used in the preparation of herbal lipstick with lycopene as a coloring agent. This lipstick shows good properties like shining of lips, spreading & smoothness of lips. The research finding that also provides a guideline on the effect of ingredient towards the physical properties and consumer acceptance of the lipstick formulation. Hence the use of natural color is a step towards healthy cosmetics and can be widely utilized by women with great pleasure.

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