



“ Formulation and Evaluation Herbal Lipstick”

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Absarct :- The natural pigment or colorant in the cosmetics, are inconceivable in demand since, historical time till day. The colors that add to the shade of the lipstick, are unsafe to people on utilization can bring about sensitivity, sickness, dermatitis, and drying of the lips. The usage of natural dyes and pigments, increase more importance in food and textile industries because of their non toxic and eco friendly characteristics. Coloring pigments is obtained from petals of *Rosa rubiginosa*, flower of *Bougainvillea spectabilis*. *Beta vulgaris* (Beetroot) and flower of *Crocus sativus*. (F1 to F4) and were evaluated on the parameters such as melting point, breaking point, force of application, surface anomalies, aging stability, solubility, pH, skin irritation and perfume stability etc... The results are shown in tab.4 and prepared lipstick in fig.2 F1 to F4. The prepared lipstick formulations F1, F2 and F4 showed ideal properties like shining, spreading and smoothness of lips after application. Also the other coloring pigments are used that is Extraction of Lycopene from *Daucus Carrot* (Carrot), Extraction Of Betalains from *Hylocereus Polirhizus* (Dragon Fruit) . Further studies through a detailed clinical trial may be suggested to ensure safety of these formulations. Hence from present investigation it was concluded that, formulated herbal lipstick having minimal and no side effects and thus showing maximum local effect on lips

Keywords :- Harbal Lipstick, Natural pigments, formulation Evaluation.

Intoduction :-

With the beginning of the civilization, Herbal cosmetic also known as “natural cosmetics”., peoples (men and women) had the magnetic dip towards impressing others with their looks was reported and there area number of wide range of herbal cosmetics products to satisfy your beauty regime, is very safe for the skin. The human beings have been using herbs for different purpose like food, medicine, beatifying with the advancement of science & technology was studied. Coloring lips is an ancient practice that dates to the prehistoric period. In present days use of cosmetic products has increased, and choice of color shades, textures, luster have been changed and become more extensive. This can be observed from the fact that lipstick is being marketed in hundreds of shades of colors to satisfy the increasing demand. In recent times lipstick has been under the scanner of many health watchers. Lipsticks are often eaten away by the user, and hence are imperative that health regulators have a microscopic look at the ingredients that go into the lipstick. Due to various adverse effects of available synthetic preparation, the present work was conceived by us to formulate an herbal lipstick having minimal or no side effects, which will extensively use by the women of our communities with great surety and satisfaction⁴⁻⁷. Lipsticks are the cosmetic product containing pigments, oils, waxes, and emollients that apply color, texture, and protection to the lipsticks. Many colors and types of lipsticks exist. As with most other types of makeup, lipsticks are typically but not exclusively worn by women. Some lipsticks are also used as lip balms, to add color along with hydration properties⁸⁻⁹. The herbs used in cosmetic preparation have varieties of properties like antioxidant, anti-inflammatory, antiseptic, and antibacterial. These herbal products claim to have no side effects that are commonly seen with products containing synthetic agents. The literature in Ayurveda, especially Charaka Samitha, stated numerous medicinal plants¹⁰⁻¹³. Among the popular functional natural ingredients, several antioxidants used in cosmetics are scientifically proven to offer additional benefits in supporting skin texture appearance and tone. The

ideal characteristics of lipsticks are that it should be non-irritating and non-toxic, should be stable both physically and chemically, should be free from gritty particles, should maintain lip color for a more prolonged period after its application¹⁴

AIM AND SCOPE OF PRESENT WORK:

The present work was designed on basis of different approaches of guided study on herbal lipstick. The list of ingredients was made. Then the literature review was done. The materials were collected and method of preparation was studied and the identification tests for coloring matter was performed of various herbal lipsticks were formulated. The prepared formulations were evaluated for various properties and results were tabulated.

MATERIALS AND METHOD:

Table 1: Instruments used

Name	Model
Weighing balance	Shimadzu Corporation Japan
PH meter	Elico
Electric water bath	Poly Science Ltd
Melting points apparatus	Esico

Table 2: Chemicals used

Name	Specification
Bees wax	SD Fine
Carnauba wax	SD Fine
White soft paraffin	SD Fine
Castor oil	SD Fine
Coconut oil	SD Fine
Almond oil	Dabur India
Oilve oil	Sengee Biochem
Essential oil	Grasee International
Rose essence	Jamson
Vanilla essence	Jamson
Strawberry essence	Jamson

METHOD OF EXTRACTION:

Lycopene extraction from tomatoes:

1. Benzene Extraction Method: We made the paste separately of tomato. In the laboratory 100 gm of paste is weigh in 250 ml beaker. Then warm the paste and add about 30 ml of warm (400°C) benzene to it. Stir well and decant the benzene layer. Again add 30 ml warm benzene, stir and decant the benzene. This has been done about 5 times. Then distil off benzene and we got residue of lycopene. Recrystallized residue by ether and weighed. Repeat the steps with another sample of tomato and record the observation. Identification test of the isolated lycopene were performed using chemical tests and by microscopic study, identification of chemical structure was done using visible spectrophotometer.

2. Methanol Extraction Method: 50 gm tomato paste was dehydrated by adding 65 ml of methanol. This mixture was immediately shaken vigorously to prevent the formulation of hard lumps. After 2 hr, the thick suspension was filtered; the dark red cake was shaken for another 15 min with 75 ml mixture of equal volume of methanol and carbon tetrachloride and separated by filtration. The carbon tetrachloride phase was evaporated and the residue was diluted with about 2 ml of benzene. Using a dropper, 1 ml of boiling methanol was added in portion, then crystal of crude lycopene were appeared immediately and the crystallization was completed by keeping the liquid at room temperature and ice bath, respectively, The crystals were washed 10 times using benzene and boiling methanol.

BEEET ROOT EXTRACTION:

Beetroot: Peel the beetroot and cut it into uniform-sized fine slices. Spread it over a butter paper, cover with a fine mesh and allow it to shade dry for a day. If there is any moisture left dry in it in an oven. Take the dried beetroot and grind it into a fine powder. Pass the powdered material through a fine sieve. Check for any grainy particles. Sieve it again if required. Weight the amount of powder and pack it.

POMEGRANATE EXTRACTION: A sweet ripen red color pomegranate is taken and its seeds are removed. The seed are taken into mortar pestle then it juice is extracted by grinding the seed into the mortar pestle. The mixture

was poured into a fine muslin cloth and was squeezed to separate the juice from the seeds. The juice was collected from the beaker and stored for further use.

CARROT JUICE EXCTRACTION: Fresh carrots are taken and their upper layer is removed by the help of peeler. The peeled carrot is grated evenly then the mixture was poured into a fine muslin cloth and was squeezed to separate the juice from the seeds. The juice was collected from the beaker and stored for the further use.

Method of formulation of lipstick:

Formulation 1- method of preparation: The herbal lipsticks were formulated as per general method of lipstick formulation. In this formulation beeswax and carnauba wax were melted in a beaker at 70°C on a water bath with decreasing order of their melting point. Similarly white soft paraffin and castor oil were taken in another beaker and melted at 70°C on a water bath in decreasing order of their melting point. The colored pigment was added to the oil phase until homogenous mixture was obtained. Then it was added to the wax phase at the same temperature. The mixture was cooled at 40°C and vanilla essence was added. The molten mixture was poured into lipstick moulds. Upon solidification it was separated from the moulds and fitted in the lipstick case.

Table: 3 Formulation 1 ingredients:

Ingredients	Quantity
Beeswax	9 gms
Carnauba wax	3gms
White soft paraffin	11gms
Castor oil	2gms
Coco powder	0.5gms
Vanilla essence	0.3gms

FORMULATION 2-METHOD OF PREPARATION: The herbal lipstick was formulated as per general method of lipstick formulation. In this formulation carnauba wax is melted in a beaker at 70°C on water bath. Similarly almond oil was melted in a beaker at 70°C on a water bath. The coloring pigment and rose oil was added to the oil phase until homogenous mixture was obtained. Then it was added to the wax phase at the same temperature. The mixture was cooled to 40°C and strawberry essence was added. The molten mixture was poured into lipstick moulds. Upon solidification it was separated from the moulds and fitted in lipstick case.

Table: 4 Formulation 2 ingredients

Ingredients	Quantity
Carnauba wax	5gm
Almond oil	15gm
Rose oil	5 drops
(Color) Rose petals	5gm
Strawberry essence	q.s

FORMULATION 3-METHOD OF PREPARATION: The herbal lipstick was formulated as per general method of lipstick formulation. In this formulation carnauba wax is melted in a beaker at 70°C on a water bath. Similarly almond oil, coconut oil, were taken in another beaker and melted at 70°C on a water bath in decreasing order of their melting point. The colored pigment turmeric was added to the oil phase until a homogenous mixture was obtained. Then it is added to the wax phase at the same temperature. The mixture was cooled to 40°C and lavender oil was added. The molten mixture was poured into lipstick moulds. Upon solidification it was separated from the moulds and fitted in the lipstick case.

Table: 5 Formulation 3 ingredients:

Ingredients	Quantity
Carnauba wax	10gm
Coconut oil	5gm
Almond oil	5gm
Lavender oil	5 drops
(Color) Turmeric	1gm

FORMULATION 4-METHOD OF PREPARATION: The herbal lipstick was formulated as per general method of lipstick formulation. In this formulation bees wax is melted in a beaker at 70°C on a water bath. Similarly coconut oil, Almond oil were taken in another beaker and melted at 70°C on a water bath in decreasing order of their melting point. The colored (cinnamon) pigment was added to the oil phase until a homogenous mixture was obtained. Then it was added to the wax phase at the same temperature. The mixture was cooled to 40°C and vanilla essence was

added. The molten mixture was poured into lipstick moulds. Upon solidification it was separated from the moulds and fitted in the lipstick case.

Table: 6 Formulation 5 ingredients:

Ingredients	Quantity
Bees wax	5gm
Almond oil	5gm
Coconut oil	15 gm
Cinnamon	5gm
Vanilla essence	q.s

IDENTIFICATION TESTS FOR DIFFERENT COLOURED MATTERS:

IDENTIFICATION TEST FOR CARROT JUICE: To the extraction of carrot add phloroglucinol, adding conc HCl (1:1) which gives pink colour, Presence of glycosides is confirmed.

IDENTIFICATION TEST FOR POMEGRANATE:

Test For Anthraquinones: 1.0ml of pomegranate extract was boiled with 2.0ml of 10.0% HCl solution for few min in water bath. It was filtered and allow to cool. Equal volume of chloroform was added to filtrate. Few drops of 10.0% ammonia were added to mixture and heated. A rose pink colour indicated anthraquinones.

TEST FOR SAPONINS: 1.0ml of each extract was added with 5.9ml of distilled water and heated to boil. Appearance of creamy mist of small bubbles indicated the presences of saponins.

TEST FOR TERPENOIDS (Salkowski Test): 1.0 ml of each extract wa mixed with 2.0 ml of chloroform and 3.0 ml of concentrated sulphuric acid was carefully added to form a layer

Reddish brown colour shows the presence of terpenoid.

TEST FOR GLYCOSIDES: 0.1 ml of each extract was hydrolised with 1.0ml of 10% of HCl solution and neutralised with 1.0 ml of 0.2M NaOH solution. A few drops of Fehling's solution A and B are added Red precipitate shows presence of glycosides.

TEST FOR FLAVONOIDS: 1.0 ml of each extract was dissolved in 1.0 ml of diluted 0.2 M NaOH and 1.0 ml 10% HCl solution was added Presence of yellow coloured turns into colourless will indicate the presence of flavonoids

IDENTIFICATION TEST FOR CINNAMON: To the extract, add volatile oil and 5 ml of alcohol, to that add 1 drop of ferric chloride gives green colour This shows the presence of cinnamic aldehyde

IDENTIFICATION TEST FOR TURMERIC : Curcumin is an orange yellow crystalline powder with melting point with 183°C . To the extract add concentric sulphuric acid on dissolving it gives yellow colour and on addition of NaOH ,it gives deep brown colour

IDENTIFICTION TEST FOR BEET ROOT: To the extract ,add few drops of diethyl ether will give violet colour that turns to yellow

EVALUATION OF HERBAL LIPSTICS:

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.

Solubility test: The formulation herbal lipstick was dissolved in various solvents to observe the solubility.

pH parameter: The pH of formulated herbal lipstick was determined using pH meter

Colour: Lip colors are products that apply color, texture, and/or shine to the lips using a brush or other applicator. Lip colors contain ingredients that apply color to the lips in a precise and controlled manner. Lip colors can also have multifunctional benefits, such as moisturizing, or may even include sunscreen for SPF protection. Lip color product safety is established by selection of ingredients that are safe and suitable for this intended use and purpose.

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 (10 gm) 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.

Table 07. Evaluation of formulated Herbal Lipsticks (F1-F4)

Evaluation Parameters

	F1	F2	F3	F4
Colour	Light brown	Light pink	Yellow	Orange
Solubility	Soluble in methanol	Soluble in methanol	Soluble in methanol	Soluble in methanol
Melting point	850 C	820C	800C	670C
pH	6.3+0.2	6.7+0.4	6.5+0.1	6.5+0.2
Skin Irritation	No	No	No	No
Breaking point	25	31	32	22
Force of Application	Easy	Good	Good	Easy
Perfumed stability	++	+++	++	+
Surface Anomalies	No defect	No defect	No defect	No defect
Aging stability	Smooth	Smooth	Smooth	Smooth

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 observed.

Skin irritation test: It is carried out by applying product on the skin for 10 min.

Perfume stability: The formulation herbal lipstick was tested after 30 days, to record fragrance

RESULTS AND DISCUSSION:

The present work formulation and evaluation of herbal lipsticks was aimed to formulate a lipstick using herbal ingredients with a hope to minimize the side effects as produced by the available synthetic ones. The prepared formulation (Table - 6.1) was evaluated (Table 6.2) and it was found that the herbal lipstick, F4 formulation containing was best among the Four formulations in terms of color and smoothness. The formulations containing carnauba wax i.e; F2 and F3 proved to be better than the rest of formulations in terms of breaking point. However the lipsticks were hard to apply in comparison to other formulations. None of the formulations produced any skin irritation. No surface anomalies were found in any formulation. Aging stability was smooth for all the seven formulations. Perfume stability was best in F2 formulation containing rose oil among all seven formulations. F4 formulations also showed adequate perfume stability upon storage. Solubility of the prepared herbal lipsticks was checked in different solvents like methanol, ethanol, chloroform and petroleum ether. All the seven formulations were found to be soluble in methanol. Hence, from present investigation it was concluded that this formulated herbal lipsticks has better option to women with minimal side effects though a detailed clinical trials may be done to access the formulation for better efficacy.

CONCLUSION:

In last few decades there has been tremendous boost in use of cosmetics by women. However, the hazards cause by these chemicals has come into limelight very recently. The present work formulation and evaluation of herbal lipsticks was aimed to formulate a lipstick using herbal ingredients with a hope to minimize the side effects as produced by the available synthetic ones. Study concluded that herbal lipstick can be successfully. formulated using different natural ingredients such as Bees wax, Carnauba wax, Castor oil, Coconut oil, Olive oil, Vanilla, Strawberry and Rose essence, Cinnamon bark powder, Turmeric powder, Beetroot powder, Cocoa powder, Pomogranate juice, Carrot juice, Tomato juice, Vitamin E and lemon juice. These are better options compared to synthetic coloring agents which may cause different and hazardous side effects. Consumers can take safe and effective advantage of herbal lipsticks after thorough clinical trials.

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