

Research Article

FORMULATION AND EVALUATION OF HERBAL LIPSTICK USING EXTRACTION OF DRAGON FRUIT (*HALCEREUS POLYRHIZUS*), BEET ROOT (*BETA VULGARIS*), LEMON FRUIT (*CITRUS LIMON*) AND ORANGE FRUIT (*CITRUS AURANTIUM*)

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ARTICLE INFO

Article history:
Received: 11/04/2023;
Revised: 17/04/2023;
Accepted: 25/04/2023.

Key Words: Beet root, Dragon fruit, Herbal cosmetic, Herbal lipstick, Surface anomalies.

Please cite this article as:
Gaikwad M., et al. Formulation and evaluation of herbal lipstick using extraction of dragon fruit (*halcereus polyrhizus*), beet root (*beta vulgaris*), lemon fruit (*citrus limon*) and orange fruit (*citrus aurantium*) 5(1), 14-18.

ABSTRACT

Herbal cosmetics are obtaining acceptance in society because of natural products are easy to handle, use and minimal side effects. The present study was done to formulate and evaluate the herbal lipstick using dragon fruit and beet root as a natural colorant. In this formulation we use Bees wax as thickening agent, white soft paraffin as a base, and coconut oil as softening agent, lemon juice and orange juice as an antioxidant, Vitamin E capsule as a smoothing agent. The formulated herbal lipstick was evaluated for Melting Point, breaking point, aging stability, pH, surface anomalies, perfume stability, skin irritation test and solubility. It was observed that all evaluation parameters of Herbal lipstick are passes with minimal or no side effects.

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INTRODUCTION

According to D&C act 1940 and rules 1945, cosmetics means any object intended to be sprayed, poured, rubbed, or spread on or introduced into, or applied to the human body or its any part for ablution, glamorize, promoting enchantment, or restyle the appearance. (Kadu, et al., 2015) Lipstick gets their colors from the dispersion of pigments and lake dyes however now not limited to Bromo acid, D&C Red No: 21, Calcium lake which includes D&C Red 7 and 34, and Orange No 17. (Diamond, et al., 1976). The very first origins of lipstick data back to the Sumerian demesne of Ur in 5,000 BC. Over the centuries lipstick has been embraced and

shunned by different cultures with swings for and against the product changing throughout history.

History of Lipstick

Ancient Egyptians loved lip paints and according to Pallangston, were masters at mixing color and particular application. In Roman days, the real lip colors were reversed for hustler, while the Ignoramus used the blue tone of the face and lip pint for men to act against into battle. Lipstick was combined with Satan during the medieval days and it was not until Elizabeth Tudor that lipstick once again became an authorized and gorgeous chief aid. In 1770, lipstick one more time fell into stain

when the British Parliament passed a law condemning the use of lip paint. Similarly, the New York Board of Health considered banning it in 1924, fearing it might Poison men who kissed the women who wore it. Providing lipstick was a relatively economical way of making women look and feel good. Lipstick, while little more than a decade before had been regarded as suitable only for fast women, became a priority product for the female market. Today, with the specialized lipstick companies that sprang up during the nineties, lipstick has undergone resurrection in popularity to become an everyday commodity. (Zuckerman, et al.,1986, Romm, et al., 1984 and Deweck, et al., 1981).

Lipstick Background

Cosmetics can be drawn back to ancient culture. In particular, the use of lip colour was widespread among the Sumerians, Syrians, Persians, Egyptians, Babylonians and Greeks. Later, Elizabeth I and the ladies of her court coloured their lips with red mercuric sulphide for years rouge was used to colouring both the lips and cheeks, bank on the dream up of the times. In western society during the latter half of the 19th century, it was generally concluded only dishonest women work lipstick or makeup at all. It was not until the twentieth century that lipstick, and cosmetics in general, gained true social acceptance. Improvement in the builder of applicators and mental tubes reduced the cost of the cosmetics. This combined with new-fangled acceptance by the general population caused widespread use and popularity to increase. Nanda, et al.,2007). By 1915 push-up tubes were accessible, and the first claims of indelibility were made. Lipstick is made to appeal to the current fashion tendency and comes in a broad range of colors. Lipstick is made of dyes and pigments in a fragrance oil-wax base. The tubes that hold lipstick range from economical plastic dispensers for lip balms to ornate metal for lipsticks. Sizes are not homogeneous, but commonly lipstick is sold in a tube 3 inches (7.6 cm) in length and about 50 inches (1.3 cm) in diameter. The tube has two parts: one is cover and another one is base. The base is made up of two compartments, the twisting (distorting) of which will push the lipstick up for appliance. Since the manufacturer of the tubes involves completely distinctive technologies, we will focus on the manufacturer of lipstick only. (Harshad, et al., 2019).

Anatomy of Lip (Basha, et al., 2011 and Balsam, et al., 2008).

The structures that enclose the oral aperture (Fig. 1). In the inner or central region their superior margin corresponds to the inferior border of the base of the nose. Laterally, their limits follow the alar sulci and the upper and lower lips link at the oral commissures. The inferior limit of the lips in the central region is known as mentolabial sulcus. Anatomically, the philtrum and its pillars are a part of the upper (superior) lip. The surface of the lip is composed of four zones: hairy skin,

vermilion border, vermilion and oral mucosa. The normal shape of the lips varies with age, and is influenced by society.

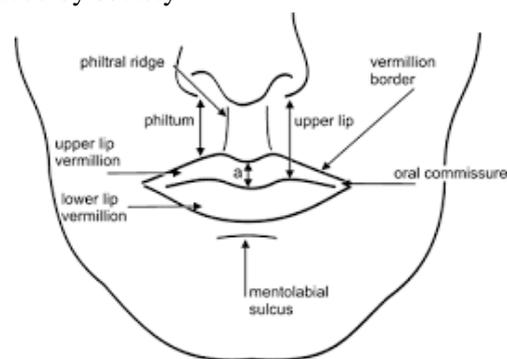


Fig. 1: Anatomy of Lip

MATERIALS AND METHODS

The herbs used in formulation of lipsticks were collected from local market, Nashik. The remaining ingredients used all are they of analytical grade.

Table 1: Formula for preparation of Herbal Lipstick

Ingredient	Qty (%)	Biological Source	Family	Uses
Bees wax	9	<i>Apis mellifera</i>	Apidae	Thickenin g agent
White soft paraffin	9	<i>Petroleum</i>	-	Base, moisturizi ng agent
Beet root extract	5	<i>Beta vulgaris</i>	Amaranth aceae	Coloring agent
Red Dragon fruit extract	5	<i>Hylocereus undatus</i>	Cactaceae	Coloring agent
Acacia	1	<i>Acacia arabica</i>	Legumino sae	Additive
Lemon juice	2	<i>Citrus limon</i>	Rutaceae	Antioxi dants, preservati ve
Orange juice	2	<i>Citrus aurantium</i>	Rutaceae	Antioxi dants, preservati ve
Vitamin E	1	-	-	Smoothin g agent
Coconut oil	2	<i>Cocos nucifera</i>	Palmae	Softening agent
Rose oil	q.s.	<i>Rosa centifolia</i>	Rosaceae	Flavourin g agent

Method of preparation

1. Preparation of Beet root Extract:

Washed beet roots

Peeled and chopped it

Beet roots are blended well, and then extract was filtered through a piece of muslin cloth.

1. Preparation of Dragon fruit extract

Washed dragon fruit

Peeled and chopped it

Chopped pieces blended well then filtered through muslin cloth.

Add methanol in that filtered and store for 3 days

Again filtered it and extract of dragon fruit was obtained.

2. Preparation of Herbal Lipstick

Weigh all herbal ingredients individually

Place porcelain dish on water bath, add bees wax in it. Then add coconut oil in melted bees wax.

Add acacia powder, dragon fruit extract, beet root extraction above mixture.

Then add orange juice and lemon juice as an antioxidant.

Add white soft paraffin, vit. E and rose oil.

Transfer it into lipstick mould and place in freezer.

Scrap the top layer by sharp knife and remove lipstick.

Place formulated herbal lipstick in lipstick mould and store it.



Fig. 2: Herbal Lipstick

Evaluation Parameters for Herbal Lipstick (Patel, et al., 2021).

The formulated herbal lipsticks was evaluated on the basis of following parameters such as melting point, breaking point, force of application, pH, aging stability, solubility and surface anomalies etc.

Melting point: Determination of melting point is important as it is a sign of the limit of safe storage. The melting point of formulating lipstick was determined by capillary tube method the capillary was filled, keep in the capillary apparatus (thieler tube) and firstly observed the product was slowly melted. After sometimes the product was completely melted and that indicates the melting point of lipstick.

Breaking point: Breaking point is done to conclude the strength of lipstick. The lipstick is seized horizontally in a socket $\frac{1}{2}$ inch away from the boundary of support. The weight slowly increased by a specific value (10 g) at definite interval of 30 second and weight at which lipstick breaks down are considered as the breaking point.

Surface anomalies: This is considered by the surface defects, such as no formation of crystals on surfaces, no contamination by molds, fungi etc. on its surface.

Aging stability: The product was stored in 40°C at 1 hrs. Various parameters such as bleeding, crystallization of on the surface and ease of application were observed and noted.

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

Solubility test: The formulated herbal lipstick was dissolved in various solvents like acetone, water and alcohol etc. & the solubility was measured.

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 the fragrance.

The various evaluations of formulated herbal lipsticks are shown in table 2.

Table 2: Evaluation parameters of formulated Herbal Lipstick

Evaluation Parameters	Inference
Colour and texture	Red and Smooth
pH	6.5± 03
Skin irritation test	No
Melting point	60-62
Breaking point	28
Surface anomalies	No defect found
Aging stability	Smooth
Force of application	Good
Solubility	Ethanol
Perfume stability	Good

CONCLUSION

Herbal lipstick has been incredible boost in use of cosmetic by women. It also helps the medicinal that softening, reduce inflammation, moisturizing the lip. In present work, extraction of colour pigment from Beet roots and dragon fruit was carried out successfully. This colour pigment was collected naturally. The herbal formulation was found to be the best and stable. Hence, from the present study it was concluded that this formulated herbal lipstick was better with no side effects. From evaluation studies, formulation of lipstick using this natural colorant was more reasonable than marketed formulation.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

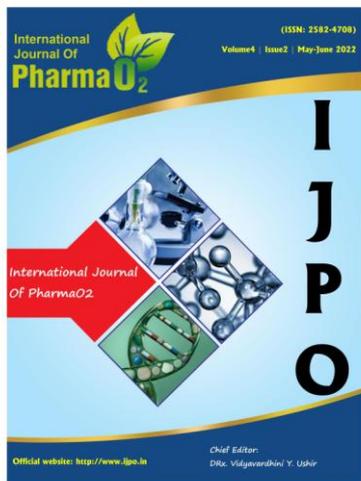
ACKNOWLEDGEMENT

We would like to express our thanks to management of SMBT Sevabhavi trust as well as HOD of SMBT Institute of Diploma Pharmacy Dhamangaon, Nashik and wishes for the successful completion of this research article.

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