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FORMULATION AND EVLUALATION OF HERBAL LIP JELLY USING PIGMENTS OF *BUTEA MONOSPERMA* FLOWER

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ABSTRACT

Cosmetics are incredible in demand. Cosmetic includes various formulations. Among them, lip jelly is having very appreciable contribution. Lip jelly is having similar properties as compared to lip balm which prevents the lips from environmental factors and colours them. Current market uses synthetic colorants in lip cosmetics which have various side effects. To over come this type of side effects we have targated different plants to extract natural colors from them and use for development of herbal lip jelly. Current formulation involves the development of lip jelly by using natural dye obtained from the flower of *Butea monosperma*. It is evaluated for organolaptic properties like colour, odour, spread ability, pH, melting point, skin irritation to achive a consistant product which will give satisfaction to woman's need.

INTRODUCTION

The word herbal indicates safety as compared to synthetic products which is having various adverse effects on human health. Herbal preparation like , herbal lipstick, lip balm, shampoo, etc having a similar property as compared to synthetic once and hence have well acceptance from the consumers[1,2]. 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 hundred of sheds of colours to satisfy the demand of women[3].

In recent times lip jelly have been under scanner of many health watchers and it is found that lip jelly is often eaten away by user and hence the ingredient is swallowed accidently in the body of user in which the dye present in the lip jelly is dangerous to consumer in mild form it is carcinogenic and can cause nausea, dermatitis and drying of lips. Because of this reasons the work is made to satisfy the need of healthcare system and consume by using natural pigment of *Butea monosperma*. *Butea monosperma* is erect medium sized deciduous tree, it grows up to 15m in height, the leaves are pinnate with an petiole of 8-16cm and three leaflets are large and stipulate, each leaflet is of 10-20cm long, the flowers are 2.5cm long and are bright orange red and produced in racemes up to 15cm long, fruit is a pod of 15cm long and 4.5cm broad[4]. The chemical constituents of the ethanolic extract of flower is Butrin, Chalcones and Aurones[5]. The various pharmacological activity proven earlier from the flower extracts are, Wound healing activity was found in methanolic extract of flower[6]. Antomicrobial activity was found in hydro alcoholic (Methanol + Water) extract of flower[7]. Acid Base indicator activity from dye obtained (aqueous extract) from flower[8]. Extract of *Butea monosperma* having negligible skin irritancy on rabbits and human skin in cream and gel formulation thus it can be potentially safe for topical cosmetics[9].

MATERIALS AND METHODS

1. Collection of plant material

The herbs used for formulation of Herbal Lip jelly were collected in the month of February 2012 from the Rajkot region, Gujarat and it is authentified by Botanical survey of India (No.BSI/Tech./2014/CP01).The flower extract is used for formulation.

2. Extraction of colour pigments

The fresh flower collected from the natural resources. The flowers were dried under shade and pulverized in the wiley millto powdered form. The air dried and crushed powder of *Butea monosperma* petals (100gm) wasextracted(hot percolation) by using methanol (90%) for 6hrs. it

produces yellowish red filtrate which turns to brown by adding few drops of aqueous solution of NaOH. This methanolic extract was concentrated. The concentrated extract was evaporated on the water bath. Dark brown coloured extract was obtained[10].

METHODOLOGY

1. Formulation of Herbal Lip Jelly

The herbal lip jelly is formulated as per described[11]. The ingredients used in the formulation are described in Table 1. Petroleum jelly and lanolin was melted and extract of herb is added and at the end of formulation orange essence is added as a flavouring agent and vanillin is added as a preservative and it is allowed to get a consistency at a room temperature only.

TABLE 1 Preparation of Herbal lip jelly with its prescribed Quantity

Ingredients(gm.)	HLJ 1	HLJ 2	HLJ 3	Use
Petroleum jelly	6	5	6	Colour solubilizer
Lanolin	2.5	3.5	2.5	Glossy & softening agent
Butea monosperma extract	0.8	1	1	Colouring agent
Orange essence	0.4	0.4	0.5	Flavouring agent
Vanillin	0.1	0.1	0.1	preservative

2. Evaluation of Herbal Lip Jelly[12,13]

Colour and odour - colour & appearance were characterized by visualizing in 10x magnification under microscope, while odour was compared by the group of evaluators (three groups of evaluators having 3 individuals in each, they have scored the perfume stability of formulation in the + mark as per result).

Test for spreadability – the test of spreadability is performed by applying the product on glass slide at room temperature repeatedly 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 following criteria are established.

Good – do not leave fragments, perfect application and no deformation of lip jelly.

Intermediate – uniform, leaves the fragment, good application but little deformation.

Bad – not uniform, leaves many fragments, difficult to apply and deformation.

Melting point – to determine the melting point the lip jelly is molten to fill in capillaries and allowed to cool to regain its original nature. Then capillaries were coupled with the thermometer and this coupled system is immersed in water at controlled temperature. The temperature at which the lip jelly is observed as fully molten that temperature point is noted as melting point

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

Skin irritation test - It was carried out by applying the product on the human skin for 10 min.

RESULTS AND DISCUSSION

TABLE 2 Evaluation of Prepared Herbal Lip Jelly (HLJ)

Parameters	HLJ 1	HLJ 2	HLJ 3
Colour	reddish yellow	reddish orange	reddish orange
Odour	++	++	+++
Spreadability	Intermediate	Intermediate	Good
MP	52±1	54±1	52±1
pH	6	5.8	6
Skin irritation	No	No	No

It was found that HLJ 3 is having satisfactory results among the all formulations. HLJ 3 having the excellency in colour appearance that is reddish orange, which is highly acceptable for lip cosmetics. Along with colour, it also has the perfume stability, perfect application and no deformation on spreading which proves its good spreadability.

IMAGE 1 Prepared Herbal Lip Jelly (HLJ 3)

CONCLUSION

Here Herbal Lip Jelly prepared from the extract of *Butea monosperma* which is previously used for the wound healing activity, anti microbial activity along with topical safety which give an ideal formulation for cosmetics which is having similar organolaptic properties as compared to marketed one and having no side effects. Thus we can move towards use of natural pigments to prepare many cosmetics like lipsticks, lip rouges, nail paints etc. Hence the use of natural pigments in the formulation of cosmetics is step towards healthy cosmetics.

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