

FORMULATION AND EVALUATION OF HERBAL LIP BALM**Md. Shadab, Vikram, Dr. C. S. R. Lakshmi* and Dr. Kavitha P. N.**

K R College of Pharmacy, Bengaluru, Karnataka, India.

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Corresponding Author*Dr. C S R Lakshmi**K R College of Pharmacy,
Bengaluru, Karnataka, India.**ABSTRACT**

Lip balm provides a natural way to keep lips healthy. In this work an effort has been made to formulate herbal lip balm to avoid the potential side effects associated with the lip balms formulated using synthetic materials. A homogeneous mixing method was used to produce the lip balm. Various parameters such as physical stability, pH, melting point, and spreadability were carried out for the evaluation of lip balm. The pH was found to be 5.5 and the melting point was 64 °C. After performing stability studies at room temperature (25.0±3.0°C) and refrigerated condition (4.0± 2.0°C), the prepared lip balm was uniform

in nature and could be perfectly applied without any deformation at room temperature and on refrigeration.

KEYWORDS: Beetroot, Nourish, Hydrated, Herbal Lip Balm, Spreadability, Lack Of Oil Gland.

INTRODUCTION

Herbal cosmetic products include various formulations. The word herbal indicates safety as compared to synthetic products which are having various adverse effects on human health. 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, lustres have been changed and became wider. This can be observed from the lip jelly, lip balm, lipstick marketed in hundreds of shades of colours to satisfy the demand. This work was intended for extensive study of natural lip balm. This was based on the comprehensive literature search of natural lip balm, significance of natural excipients along formulation and evaluation of lip balm. These products are evaluated for organoleptic properties like colour, Odor, spread ability, pH, melting. The colour of a product also provides an indication of product quality and freshness. Natural colours are, however, less toxic compared to synthetic colours.

MATERIALS AND METHODS

Materials

Ingredients	Quantity					Uses
	F1	F2	F3	F4	F5	
Beeswax	4.5 g	4 g	5 g	4 g	4.5 g	Used as base, provides texture, and helps create a protective barrier)
Lemon oil	2 ml	2 ml	2 ml	2 ml	2 ml	Moisturizes and nourishes the lips.
Cocoa butter	2 g	2 g	2 g	2.5 g	2.5 g	Humectant
Peppermint oil	0.25 ml	0.25 ml	0.25 ml	0.25 ml	0.25 ml	Perfume
Honey	0.25 ml	0.25 ml	0.25 ml	0.25 ml	0.25 ml	Preservative moisturizer
Turmeric powder	0.5 g	0.5 g	0.5 g	0.5 g	0.5 g	Colouring agent

METHODOLOGY

Fresh lemons were purchased from the market and then washed using distilled water. Then grated them using stainless steel grater and then soaked 1/4th grated lemon in 3/4th of olive oil in a glass jar. The lemons were soaked for 2 weeks, shaking once per day. After 2 weeks, filtration was carried out to separate the solid residue from the filtrate by using cheese cloth and the filtrate was kept in an airtight container.



General Procedure for Lip Balm Formulation

Preparation

1. A water bath is kept on the burner and is filled with water for boiling.
2. Bees wax filled in china dish is kept on the boiling water.
3. The beeswax is heated till it melts properly.
4. To the molten beeswax, cocoa/shear butter and honey/vitamin E are added and is made homogeneous with slow stirring with glass rod.
5. In the mixture API is added and mixed properly.

6. After homogeneous mixture is obtained, colouring agent and perfume is added.
7. The mixture is poured in the container.
8. Then the mixture is cooled in the ice bath or dried in the sunlight.



Evaluation Tests^[7]

1. Melting test

To determine the melting point of the lip balm sample, one end of the glass capillary was sealed with flame. The drug-containing capillary was dipped in a liquid paraffin solution within the melting point apparatus, which was equipped with a magnetic stirring facility. The melting point was determined visually, and the melting point was reported.^[10,14,15]

2. Organoleptic properties

- a. A study was conducted on the lip balm to determine the fundamental organoleptic properties, including colour, smell, taste, and texture.

3. Test of spreadability

The product was put back and forth on a glass slide at room temperature to see how well the protective layer formed and if the stick broke when it was applied.

1. **G-** The results of the test indicated that the lip balm was applied consistently.
2. **I** -The middle ground is pretty much the same - it's uniform, there's not a lot of mess, it's applied correctly, and it doesn't break down too much.
3. **B-** This lip balm is bad because it's not consistent, it leaves a lot of pieces behind, it's hard or not right, and it's hard to apply and the lip balm gets really distorted.

4. pH measurement

The pH study was carried out by dissolving 1 gm of sample into 100 ml water. The pH measurement was done using pH paper.^[8]

5. Stability studies

Prepared lip balm was placed for accelerated stability studies at room temperature (25.0 ± 3.0 °C), refrigeration (4 ± 2.0 °C) and oven temperature (40.0 ± 2.0 °C) for 30 days. After 30 days, it was again characterized for organoleptic properties, melting test, spreadability, and pH.^[7]

RESULTS AND DISCUSSION

Organoleptic Characteristics

Parameters	Observation
Colour	yellowish
Odour	Pleasant
Appearance	Smooth

Melting Test

Melting point of lip balm was found to be in the range of 64, which matches with the appropriate melting point of between 65 and 75.



Test of Spreadability

Prepared lip balm was tested for its ability of spreading which initially has shown uniform application in room temperature.

Measurement of pH

Parameters Temperature condition	Colour	Odour	Melting point	Spreadability	Ph
25 ± 3 °C	yellowish	Pleasant	64	G	5.5
4 ± 2.0 °C	yellowish	Pleasant	65	G	6
40 ± 2.0 °C	yellowish	Pleasant	65	I	5.5

The pH of lip balm was near to neutral pH i.e 5.5.

Stability Studies

Parameters Temperature condition	Colour	Odour	Melting point	Spreadability	Ph
25±3°C	yellowish	Pleasant	64	G	5.5
4±2.0°C	yellowish	Pleasant	65	G	6
40±2.0°C	yellowish	Pleasant	65	I	5.5

CONCLUSION

It is concluded that Herbal Lip Balm can be an effective treatment for a variety of lip issues, and the results of the stability tests demonstrate that the formulation can be maintained at room temperature and in a refrigerator. Additionally, the organoleptic characteristics are stable and the spreadability is rated as "Good". When considering storage under these conditions, the functionality of the product is maintained, and the melting point ranges from 68 to 68°C, suggesting that the prepared formulation of the lip balm is more stable. However, the spreadability test and the developed formulation results suggest that storage in an oven is not recommended, as the product functionality was lost during the normal stability test.

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