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Formulation & Evaluation of Nautral Lip Balm By Using Rose Petals

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Abstract: *Since ancient times, there has been a great desire for cosmetics due to their stylish and safe features. These days, the emphasis is more on products made with physiologically active ingredients. Cosmetic goods with a natural derived formulation and design quality. Cosmeceuticals are cosmetics that mimic the effects of prescription or over-the- counter medications. Lip balm formulations are the most often used cosmetic products to improve the appearance of lips. To make lip balm, a number of components were used, such as coconut oil and vitamin E. By evenly combining these ingredients, a lip balm that promotes and maintains healthy lips is produced naturally. The majority of cosmetic lip products on the market today include dangerous heavy metals like lead and its replacement, which can damage heart and neurological function and cause cancer in a number of important organs. Cadmium and chromium can also cause cancer in these organs..*

Keywords: Natural lip balm, Moisturiser, Natural ingredients, Dry lips, Safeguard, Evaluation, Formulation, Cosmetic

I. INTRODUCTION

Cosmetics play a big part in today's life cycle. Additionally, the trend toward going green is influencing practically every industry, including cosmetics, to adopt a more natural way of life. Natural foods, herbal remedies, and natural curing practices are preferred choices for leading a healthy lifestyle, and there is a high demand for organic vegetable products. Natural products have been utilized for millennia as traditional medicine all across the world. Numerous of them are known to be beneficial for human medicine due to their pharmacological properties, which include antibacterial, anti-inflammatory, and cytostatic effects. The traditional method of enhancing lip beauty is lip coloring. It adds a glamorous touch to facial makeup; the desired shades of color, texture, and sheen are met.

Aim & Objective :

Aim

Formulation and evaluation of natural lip balm using rose petals

Objective -

Gives natural moisture to lips it makes the lips soft
repairs dry and chapped lips
lips balm restores originalcolour of lips prevent lips dryness

Ingredients

Bees wax: Beeswax is a water-resistant substance that has been used in cosmetics. In cosmetics, it serves as a thickening, emulsifying, and stiffening ingredient. Bee wax has the potential to aid with skin hydration. Beeswax is a naturally occurring emollient that helps to keep lips hydrated, shield them from the sun and wind, and keep their skin from being dry and irritated. Bee wax has softening and lubricating properties. Vitamins, minerals, and antioxidants found in beeswax are good for the skin.

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Figure 1 Bees wax

Coconut oil: Edible oil called coconut oil is collected from the mature coconut and mature coconut palm tree. a plant belonging to the Aceraceae family. The primary component of coconut oil that sets it apart from other dietary oils is medium chain fatty acids. Coconut creates a barrier that keeps irritants and microorganisms from doing further harm.Lauric acid, which is present in coconut oil, has nourishing, anti-fungal, and anti-microbial qualities.

Figure 2 Coconut oil

Castor oil: Castor oil which helps to moisturize, smooth and glossy lips. Castor oil has wound healing properties.

Figure 3 Castor oil

Rose petals: Rose petals can be used as an effective treatment for lightning dark lips. Rose petals are good source of vitamin C, iron, calcium, vitamin A. It exhibits a curious property known as hydrophobicity.(11).

Figure 4 Rose petals

Vitamin E :

Vitamin E :Oxidant and environmental conditioner, folic acid. Vitamin E slows down the ageing process, keeping the lips' delicate, young texture. Dry, chapped lips can be treated with topical vitamin E oil Utilising vitamin E on dry lips speeds up the appearance of newly formed cells because it encourages cell repair and cycle. The vitamin E. oil's thick

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and greasy texture can also prevent further irritation. The extent of the freshness of a product can also be determined by its hue. Nature colours, however, are less hazardous than manufactured ones. For appealing colours, synthetic dyes were used commercially. However, it is harmful to the environment and skin. Lip balm's usage guarantees that dry, cracked lips quickly repair. Your lips'

Fig.no.5 Vitamin E

Honey :

Honey is a characteristic humectant, and in view of this that it draws in and holds dampness, keeping your lips hydrated over the course of the day. Honey additionally has mitigating properties to assist with alleviating dried lips. Honey's antibacterial properties additionally help to forestall contamination assuming that the lips become broken. It has been reported that honey can facilitate removing necrotic tissues, increase the granulation and epithelialization speed, and red scars.

Fig.no.6 Honey

History:

The history of lip balm can be traced back to earwax, and Charles Browne Fleet began commercializing it in the 1880s. This product, later called "ChapStick," became a household name. More than 40 years before Swift introduced lip balm to the market, Lydia Maria Child suggested in her enormously popular book The American Girl that chapped lips might be treated with earwax .The history of lip balm can be traced all the way back to ancient civilizations. As early as 40 B.C., Egyptians who were widely known for their dedication to cosmetics and the preservation of natural beauty had figured out how to create a concoction of beeswax, olive oil, and animal fat to soothe their parched lips.

By the early 1900s, in regions across the world, such as in Japan and Sweden, ingredients like yuzu (Japanese citrus fruit), camellia oil, and tea had become popular remedies for dry lip.

In America, the "American Frugal Housewife" book (originally published in 1829) mentioned the use of wax and other emollients to protect and soothe cracked lips. However, it was not until the late 1800s that lip care began its commercial journey. Soon after, in the 1930s, Alfred Woelbing created Carmex, a lip balm intended to treat chapped lips and cold sores, recognizing the breadth of conditions and sensitivities that lips can face.

Benefits

• Every ingredient is natural The fact that organic lip balms are made entirely of natural components is one of its main advantages. This indicates that no artificial components were used in their production. Because it is all-natural, it is also more environmentally friendly.

• It is free from harmful chemicals Another important reason why you should switch to an organic lip balm is that it does not contain any harmful chemicals.

• It protects the lips from harmful external factors Aside from keeping our lips moisturized, an organic lip balm can also protect our lips from external factors such as weather that leave lip dry. Beeswax creates layer of protection over lip.

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It helps soften the lips:

It smells great

Considering healthy ingredients that go into the organic lip balm, it releases a naturally sweet scent despite being fragrance-free.

Moisture lock

Lip balms can create a protective barrier on the lips' surface, locking in moisture and keeping them hydrated for longer periods than bare lips alone.

Sun protection

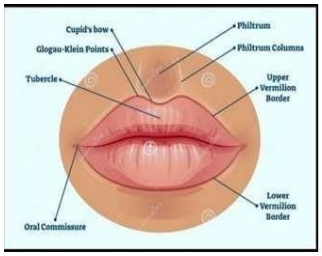
With frequent reapplication, this can reduce the risk of sunburn, premature aging, and even skin cancer.

Soothing properties

Ingredients such as vitamin E in lip balms can offer soothing qualities

Anatomy of lip:

The upper lip is situated between the mouth opening and the nose. The nasolabial grooves, which start from the nose and go about 1 centimeter lateral to the mouth's angles, divide the lips from the cheeks laterally. When you smile, it's easier to see these wrinkles or grooves. The philtrum, which means "love charm" in Greek, is an infranasal depression on the upper lip that stretches from the external nasal septum, which divides the nostrils, to the vermillion border, which is the distinct line that separates the colored edge of the lip from the surrounding skin. The lower lip lies between the mouth and the labiomental groove, which separates the lower lip form the chin .While some of the lip's lymphatic veins go to the submaxillary glands, others flow to a gland located slightly above the hyoid bone's body. The submucous layer of the lips, directly surrounding the mouth opening, contains the labial glands. They release a mucous substance. The development of mucous retention cysts occurs when these glands' ducts obstruct.



Lip disorder:

Kawasaki disease, a disease of unknown cause that usually occurs in infants and children 8 years old or younger, can cause dryness and cracking of the lips and reddening of the lining of the mouth.. Acidic environment (pH = 3.4– 6.1), high osmotic properties, avoids dressing from sticking to the wound, and decreases the dislodgement of granulation tissues at the time of dressing.

Swelling: An allergic reaction can make the lips swell. A condition called hereditary angioedema may cause recurring bouts of swelling. Nonhereditary conditions such as erythema multiforme, sunburn, cold and dry weather, or trauma may also cause the lips to swell.

Sun damage: This type of damage can be reduced by covering the lips with a lip balm containing sunscreen or by shielding the face from the sun's harmful rays with a wide- brimmed hat.

Inflammation: Cheilitis may result from a deficiency of vitamin B2 in the diet.

Discoloration: Freckles and irregularly shaped brownish areas (melanotic macules) are common around the lips and may last for many years.

Sores: Other sores may develop as symptoms of other medical conditions, such as oral herpes simplex virus infection or syphilis. Still others, such as keratoacanthoma, have no known cause .

Characteristics of Natural Lip Balm

Natural components: Natural lip balm is made with herbs, plant extracts, and essential oils. These ingredients are frequently organic, non- toxic, and free of flavourings, colourings, and preservatives made artificially. Healing and

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soothing: Herbal lip balm includes herbs that repair and relieve dry, chapped lips. Beeswax for example, create a barrier that locks in moisture and guards against further harm to the lips.
Nourishing: Natural oils and moisture in the lips are restored by the nourishing elements in herbal lip balm. Coconut oil, Castor oil, and vitamin E oil are examples of ingredients that provide moisture and nutrients that support healthy lips.
Multi-functional: In addition to treating viral infections and fever blisters, herbal lip balm may also protect the lips from the sun's harmful rays. Using herbal lip balm to take care of your lips is a simple, kind, and efficient way for doing this.

Application of Natural Lip Balm :
Products called lip balms are applied to the lips to relieve dryness and provide defense against damaging external factors. Since lipstick is a cosmetic form similar to lip balm, there is currently minimal information on this type of formulation in the cosmetic information that is available. The concentration of the main constituents, including oils, butters, and waxes, as well as other excipients, must be balanced to make lip balms. Using natural lip balms is a natural way to keep your lips developing healthily.
Advantages of Natural Lip Balm:
• Lip balms help to protect the natural health and beauty of the lips.
• Sun block lip balms are proved to prevent ultraviolet rays from hurting the lips.
• They are not gender specific products and both men and women can use them.
• Lip balm products help to protect lips affected by cold sores, chapping and dryness.
Dis advantages of Natural Lip Balm:
• Lip balms made of low quality ingredients can harm the lips seriously. Such lip balms may dry out the lips instead moisturizing it.
• Lip balm addiction is another disadvantage usually seen with the use of them.
• Compared to commercially-prepared lip balms, homemade lip balms tend to stay on the lips for a shorter duration of time. Thus need to reapply often.

The Cosmetological Importance of Rose
Most rose essential oils used in skincare products are made by steam distillation, with the Damask rose (scientific name Rosa damascena) being the most popular source. Because damask roses contain powerful antibacterial and anti-aging properties, they can effectively combat extremely harmful germs like Staphylococcus aureus and Escherichia coli, which are resistant to even the most potent pharmaceutical drugs.
Damask roses are a great option for wound healing because of this capacity! A single ounce of rose essential oil is made from tens of thousands of rose petals, making it extremely concentrated—just a few drops are needed to experience the advantages of this oil.
Rose essential oils: free radical neutralizers as antioxidants Antioxidants are chemicals that shield the body from oxidative damage caused by free radicals. Free radicals, unstable molecules with an unpaired electron, try to grab electrons from other molecules, causing them to become essentially out of balance. This process is known as oxidative stress.

Rose water: the ultimate balancer Maintaining proper pH is absolutely essential to healthy skin. Our skin has what is called an ―acid mantle,‖ a thin layer that naturally fights infection and environmental factors. Pollution, environmental toxins, and the sun all play a role in breaking down the skin's pH balance. Rose water can also help provide skin with a quick boost of hydration when needed, and can help fight free radicals when used daily.
Damage from free radicals can be severe and may even lead to fatal illnesses like cancer if they cause essential components (like DNA molecules) to have an imbalanced structure.
perfect additions to moisturizers, allowing you to fully benefit from their antibacterial and antioxidant properties.

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MATERIAL AND METHOD :

The ingredients which are use in formulation of lip balm as follow:

Table 1: Materials of natural lip balm

Ingredients	Manufacturer
Bees wax	Arjun Beeswax
Castor oil	Lab scale
Vitamin E	Merck PVT LTD

Coconut oil purchased from local market, and rose flowers from near market

Table 2: Formulation of natural lip balm

Sr.no	Ingredient	Importance	A	B	C
1	Rose petal	Colouring & lightining agent	1.5g	1.5g	1.5g
2	Coconut Oil	Moisturizing agent and Emollient	10ml	15ml	20ml
3	Beeswax	Thickening and preservating agent	4.5g	5.5gm	3.5gm
4	Vitamine E	Anti-oxidant	2.5g	2.5g	2.5g
5	Castor Oil	Glossy and smoothner	1.5ml	1.5ml	1.5ml
6	Honey	Lighten up of dark lips	5gm	5gm	5gm

PROCEDURE- PREPARATION OF ROSE OIL EXTRACT

1) Use all fresh, clean & dry rose petals.
2) Then, take a mortar & crush the all leaves gradually them.
3) All leaves crushed nicely and now, add 1 tap coconut oil in beaker.
4) Mix leaves with oil.Crushed leaves with oil.
5) Again add 2 tsp coconut oil. Mix well them & it boil in water bath for 10 min.

Figure9:Preparation of Rose petal soil extract Procedure - Preparation of Lip Balm

• In a clean evaporating dish, take Bees wax firstly and melt it on a water bath (notexceeding the temperature range of 50-64°C) label it as A.
• Then add the castor oil and Vitamin E respectively and stir vigorously and label it as
• B. Pour the contents of porcelain Dish B into Dish A by observing the uniform temperatures of both the dishes and adding it drop by drop with vigorous stirring.

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• Finally add Rose oil to the Formulation and lastly pour the liquid lipbalm into a clean wide mouth container.
• Close & keep in a cold place for 2 hrs. Then after mix them up nicely. As you start mixing it start melting. After microwave 5 sec, then get upper layer.
• Now refrigerate it for 1 hr. Lip balm is ready.

EVALUATION :

Evaluation Parameters

For lip balm Quality of a lip balm product can be assessed by the product performance. Therefore significance of evaluation parameters of any product is abundant. It helps to maintain the stability along with the purity and uniformity of product. The main evaluation parameters of lip balm products are described in this section. Theappearance of cosmetics products plays paramount role from consumer's perspective. This includes color, odor and texture of the product.

Organoleptic Properties

The lip balm was studied for the basic organoleptic characters such as colour, odour, taste and appearance.

Melting point:

For melting point, the sample of lip balm was taken in a glass capillary whose one end was sealed by flame. The capillary containing drug was dipped in liquid paraffin inside the melting point apparatus which was equipped with magnetic stirring facility. Melting was determined visually and melting point was reported.

pH test:

To check for any potential negative effects, the lip balm's ph was measured. It was decided to maintain the ph of the lips neutral because an acidic or alkaline ph could cause irritation. Formula as unbiased as it is possible to be. Dissolve 1 gr of test sample in a 10ml of distilled water. Determine the ph of the test sample by ph meter.

Skin irritation test:

It is carried out by applying product on the skin for 10 min. And then observe any irritation and then reported.

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

Stability studies:

Organoleptic characteristics, melting point, ph, and spread ability of prepared lip balm were evaluated for testing and the expediting of stability experiments over a 30-day period at room temperature (25°c), refrigerated (5°c), and oven temperature (40°c).

Test of spreadability :

The product was applied (at room temperature) repeatedly onto a glass slide to visually observe the uniformity in the formation of the protective layer and whether the stick fragmented, deformed or broke during application.

Table 3: Evaluation of Spreadability test

Spreadability Rating	Description
G - Good	uniform, no fragmentation; perfect application, without deformation of the lip balm.
I - Intermediate	uniform; leaves few fragments; appropriate application; little deformation of the lip balm.
B - Bad	not uniform; leaves many fragments; difficult or inappropriate application, intense deformation of the lip balm.

Breaking point

The strength of Lip balm was assessed using the breaking point method. The lip balm was positioned inch from the edge of the support and held horizontally in a socket. The weight was increased progressively by a predetermined amount (10 gm) at predetermined intervals of 30 seconds, and the weight at which it broke was regarded as the breaking point.

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RESULT :

Organoleptic Characteristics

Prepared lip balm has shown faint pink colour with pleasant odour. All results are presented are as follows:

Figure 9: Natural lip balm by using rose petals

Test of Spreadability

Prepared lip balm has shown, G – Good livery, no fragmentation; perfect operation, without distortion of the lip attar, without any deformation at room temperature.

Figure 10: Spreadability test

Melting Point

Melting point of lip balm was found to be in the range of 66ºC- 68ºC, which matches with the appropriate melting point of between 65 and 75ºC.

Measurement of ph

The pH of lip balm, was near to neutral pH i, e 7.2 this would not cause any irritation to lips.

Perfume stability

The stability of perfume in lipbalm is stable for 1 to 30 days.

Table 4: Evaluation Parameter & Result

Sr. No.	EvaluationParameter	ObservedValue
1	MeltingPoint	63°C -65°C
2	OrganolepticProperties	-
2.1	Colour	Faint Pink
2.2	Odour	Pleasant
2.3	Appearance	Smooth
3	Test ofspreadability	-
4	PH Measurement	7.2
5	Breaking Point	29gm

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Stability studies

Stability study of formulation can be defined as time from date of manufacture and the packaging of the formulation, until its chemical or biological activity is not less than predetermined level of labeled potency and its physicalcharacteristics have not changed appreciably, The main aim of stability study is to provide evidence on how the quantity of drug or drug product varies with the time under the influence of the variety of environmental factors.

Table 5: Stability studies of lip balm at different temperature

Parameters	Temperature Condition		
	25.0±3.0°C	4.0±2.0°C	40.0±2.0°C
colour	Faint Pink	Faint Pink	Faint Pink
Odour	Pleasant	Pleasant	Pleasant
Melting Point	63°C	65°C	64°C
Spread ability	Good- uniform, no fragmentation; without deformation of the lipbalm.	Good- uniform, no fragmentation; without deformation of the lipbalm.	Intermediate-uniform; leaves few fragments; little deformation of the lipbalm.
PH	6.2	6.5	7.2

DISCUSSION :

The main goal of the formulation was to use as many natural ingredients as possible to preserve the natural properties of lip balm because ordinary lip balm frequently contains toxic ingredients like petrolatum, synthetic waxes, alumina, parabens, hydrogenated oils, artificial fragrances, and colours. Impatiens balsamina was used to create natural colour that is additionally less hazardous than manufactured colour. A melting point test, a pH measurement, a test for spread ability, and stability studies were performed on the prepared lip balm. The pH was determined to be 7.2 , and the melting point was discovered to be between 63°C and 65°C. Test results for spread ability were G- Good: consistent, no fragmentation; smooth application, with no lip balm deformation. After completing of the lip balm's stability studies at various temperatures, it was discovered that the lip balm at room temperature (25.0°C to 3.0°C) and refrigerator (4.0°C to 2.0°C) displayed Good: uniform, no fragmentation; perfect application; and no deformation of the lip balm, while Intermediate: uniform; leaves few fragments; appropriate application; and minimal deformation of the lip balm at oven temperature (40.0°C to 2.0°C).

II. CONCLUSION

Due to tremendous demands of beauty enhancing products cosmetics industry is flourishing. This work has reviewed the current status of natural lip balm products. This also studied all aspects of natural lip balm including natural ingredients, formulation methods, evaluation and applications. Hence it can be concluded that the extensive literature study has been performed on the natural lip balm products and shown wide scope for such products in future.

The organoleptic characteristics were stable and spreadability was found to be "Good". According to the test of spreadability, the storage condition of oven (40.0±2.0°C) and appropriate melting point (mean of 64°C). By alteration of the excipients or further combinations of the excipients can result in a new formulation with a different and enhanced quality. From the current studies it was predicted that the formulation will remain stable.

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