



Formulation and Evaluation of Anti-acne, Moisturizing Lotion Bar of *Glycyrrhiza glabra* and *Butea monosperma*

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Abstract

The major intention of this study was to prepare herbal lotion bar using natural ingredients. Nowadays Cosmetics plays a key role for both men and women in embellishing and altering the appearance of skin. One may increase their confidence by using skin care products. As skin is the largest organ of our body, an individual's health is foremost represented by skin. Environmental factors such as pollution, dust particles, UV rays, etc. have major effect on skin and may cause many skin problems. We can get cure by using topical applications of herbal or synthetic cosmetics. The use of natural ingredients will not bring any side effects to the face and they give better appearance to the skin. In this study, herbal lotion bars have been formulated using two main herbal ingredients such as Liquorice & Palash Flower including other ingredients such as, Almond oil, Rose oil and olive oil. The Lotion bar was evaluated using different parameters such as colour, odour, pH, sensitivity test, grittiness etc. The lotion bar shows magnificent effect on acne and pimple conditions.

Key words: Liquorice, Palash Flower, Lotion Bar, Acne

Introduction

Cosmetic¹

The word cosmetics derives from the Greek word "kosmetiketekhne", meaning "technique of dress and ornament", from "kosmetikos", "skilled in ordering or arranging" and that from "kosmos", meaning "order" and "ornament". Cosmetics are constituted from a mixture of chemical compounds derived from either natural sources, or synthetically created ones.

Herbal Cosmetic²

These are the cosmetics which are prepared using plant products having cosmetic actions. Recently the use of botanicals in cosmetics has increased mainly due to the mild action and non-toxic nature. In cosmetics, both natural and phyto-ingredients are used. Natural products include oils, extracts, secretion etc. Phyto-ingredients include pure constituents obtained by various processes.

The herbal cosmetics are the preparations containing phytochemical from a variety of botanical sources, which influences the functions of skin and provide nutrients necessary for the healthy skin or hair. Herbal cosmetics, here in after referred as products, are formulated, using various permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to provide defined cosmetic benefits only, shall be called as "Herbal Cosmetics."

Lotion Bar^{7,8}





As the name suggests, a lotion bar is, well, a bar of lotion. It is zero-waste alternative to traditional plastic-bottle-based moisturizers. Rather than squeezing lotion out of a rigid and wasteful bottle, you rub the bar right on your skin when you need to apply.

Lotion bars are typically made with natural ingredients that stay solid at room temperature, but melt a little from body heat, making it easy to apply the lotion bar as needed and store in a reusable container. This eliminates



both the plastic waste from the bottle and water added to traditional lotion. Lotion bars pack in all the best moisturizing ingredients, concentrated without excess water. Lotion bars are super moisturizing. These bars are a solid concentration of quick-absorbing oils and butters that protect your skin. This combination of oils, butters, and beeswax seal in moisture instead of letting it escape which is called trans-dermal water loss or TWL.

Additionally, rather than coming in disposable packaging, lotion bars come in a tin. These tins can be repurposed later.

Drug Profile

<p>Jethi Madh⁴⁸</p> 	<p>Synonym: Liquorice</p> <p>Biological Source: Liquorice is the dried, peeled or unpeeled roots, rhizome or stolon of <i>Glycyrrhiza</i></p> <p>Family: Fabaceae</p> <p>Uses: Liquorice is said to have a soothing effect on skin and helps to ease inflammation. The glycyrrhizin found in liquorice can reduce redness, irritation and swelling, and is used to treat skin conditions like atopic dermatitis and eczema.</p>
<p>Palash Flower⁴⁷</p> 	<p>Synonym: Kesuda</p> <p>Biological Source: Palash consists of dried seed, fruit, leaves and flowers of <i>Butea monosperma</i> Lam.</p> <p>Family: Fabaceae</p> <p>Uses: The residue derived from Palash leaves has astringent traits. This helps in neutralizing the highly inflamed spots on skin. It also efficiently reduces any boils, pus or carbuncles on the areas of the skin affected by allergies, fungal infections, environmental pollutants and sun rays.</p>
<p>Candelilla Wax¹¹</p> 	<p>It contributes shine and functions as a stabilizer, an emulsifier, a fast-absorbing lubricant, and a nourishing skin conditioner.</p> <p>Candelilla Wax is reputed to help reduce the appearance of stretch marks as well as the signs of aging, such as wrinkles and age spots. Furthermore, it is said to hydrate parched and scaly skin for enhanced smoothness.</p> <p>Candelilla wax is a natural binder for cosmetic ingredients. It spreads better and is absorbed easier than beeswax (beeswax is not vegan or considered cruelty free)</p>
<p>Shea Butter¹³</p> 	<p>Shea butter comes from the nut of the karite tree (<i>Vitellaria paradoxa</i>). It is found in Africa. This tree produces fruits that are used to make butter, but the fruit contains little oil. The nuts are gathered, and the oil is extracted from them.</p> <p>Shea butter is a vegetable fat that has been used in traditional skincare for centuries by various ethnic communities in Africa. The Shea nut contains about 44% butterfat, 18% protein, 25% carbohydrates, 5% ash and 2% fiber. Shea butter has been reported to have anti-inflammatory, anti-oxidant, antibacterial and wound healing properties. The healing properties of Shea butter have also been confirmed in several studies.</p> <p>Shea butter is high in vitamins A & E, aids in regenerating skin</p>

	<p>cells, and maintains your skin's hydration by keeping it soft and flexible.</p>
<p>Rose Oil¹⁶</p> 	<p>High-quality, pure Rose Essential Oil (or Rose Otto) is steam distilled from the fresh petals of Rosa Damascena in a highly elaborate and delicate process. It takes about 2 tons of rose petals to produce just 1 kg of Rose Oil, making it extremely precious and the most expensive oil on the market.</p> <p><u>Antibacterial Properties of Rose Oil</u> First and foremost, pure Rose Oil is an antibacterial substance. That is one of the reasons why it is effective on acne prone skin. It is capable of both nourishing and disinfecting the skin. It is so potent actually that it is also used in treating scars and other skin imperfections.</p> <p>Bulgarian Rose Oil, in particular has strong anti-inflammatory properties that can help reduce Rosacea and soothe irritation; all while giving you a glowing complexion. It is naturally antibacterial and astringent, making it an excellent choice for those looking to clear pores and decrease breakouts.</p> <p><u>Nourishes the skin</u> The natural, pure Rose Oil contains more than 50 compounds that are beneficial for the skin. These naturally occurring molecules are impossible to create in a lab. Consequently, artificial Rose Oil (known as Artisan oil) has absolutely no benefits for the skin (it just smells like roses).</p> <p><u>Fights wrinkles</u> Pure Rose Oil has been used for centuries for its beautifying properties. One of its most important properties is that it helps skin stay younger for longer. Thanks to unique combination of antioxidants like citronellol and geraniol, pure Rose Oil helps diminish signs of aging and slows down the free radical damage.</p>
<p>Olive Oil¹⁵</p> 	<p>Olive oil is rich in vitamins and antioxidants, and has been linked to improved skin miniaturization, anti-aging effects, and relief from sun damage. It can be used on the skin on its own or as part of skincare products such as facial cleansers or lotions.</p>
<p>Almond Oil¹⁷</p>	<p>Using sweet almond oil on the face has several advantages: Over time, it can balance out your skin tone and enhance your appearance, uncovering a revamped version of your skin. Almond oil is light and non-irritating, making it ideal for delicate skin. It can also help the skin regain its inherent luster. Sweet almond oils also utilised for body massaging for this reason. It works best when it is at the same temperature as your body.</p>

	<p>It is a substitute for coarser substances for acne sufferers since it removes excess sebum on the skin and reduces irritation.</p> <p>Almond oil for the face, when used as a cleaning agent, can effectively deter acne caused by grease.</p> <p>It also has Tazarotene, which helps cleanse pores and minimize acne outbreaks.</p> <p>Almond oil has a very soft texture, one of its finest qualities. This allows the oil to enter the skin thoroughly and remove accumulated dirt while making it easier for the body to assimilate. This, in turn, inhibits pimples from forming.</p> <p>Almond oil contains Vitamin A, which has been shown to minimize acne flare-ups.</p>
<p>Vitamin-E⁴⁶</p> 	<p>Vitamin E oil is an ingredient in many skincare products; especially those that claim to have anti-aging benefits.</p> <p>Vitamin E oil's potential benefits derive from two key features: its antioxidant properties, which could fight inflammation and slow the effects of free radicals, and its moisturizing properties.</p> <p>Vitamin E oil may have various benefits for the skin, especially in people with dry or itchy skin, psoriasis, and eczema. It may also help prevent wrinkles, heal wounds, and make scars less visible.</p>

Formulation Table of Lotion Bar:

Ingredients	Quantity
Candelilla Wax	20%
Shea Butter	15%
Liquorice Extract	20%
Palash Flower Extract	10%
Rose Oil	10%
Almond Oil	10%
Olive Oil	10%
Vitamin-E	5%

Formulation Table of Extract

		Ingredients	Quantity
Liquorice extract		Liquorice	28.5%
		Ethanol	71.5%
Palash flower extract		Palash Flower	16.6%
		Water	83.4%

Extract Preparation:

Both the extracts were prepared by soaking ingredients in given respective solvents for 40 to 45 minutes, followed by filtration.

Preparation Lotion Bar:

Lotion bar was prepared by adding Shea butter to the melted wax followed by mixing required quantities of prepared extracts and oils. At last mix Vitamin E and pour into the moulds for settling.

**Evaluations of Herbal Lotion Bar:****Physical evaluation:**

The lotion bars were observed for state, colour, odour and texture.

Spreadability, Greasiness and Sensitivity:

A small amount of lotion bar was applied on the skin in one stroke and observed for ease of application, spreadability, greasiness and sensitivity.

Stability test:

Accelerated stability testing was performed.

Results

Evaluation parameters	Observations
State	Solid
Colour	Light yellow
Odour	Rosy smell
Texture	Smooth and uniform
Spreadability	Easily spreadable
Greasiness	No Greasiness
Sensitivity	Non-Irritant
Stability	Stable

Conclusion

In this study, herbal lotion bars containing Liquorice and Palash flower were prepared and evaluated. The formulation was characterized for different evaluation parameters like state, colour, odour, texture, spreadability, greasiness, sensitivity and stability and achieved desirable results. By this study a cost effective natural herbal product for anti acne with moisturizing properties could be formulated, would be beneficial in many ways to users.

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