

PREPARATION AND EVALUATION OF HERBAL LOTION REVIEW

Y.B Raut. Sanjay.K. Bais, Samruddhi M. Swami,
Fabtech College of Pharmacy, Sangola -413307 India.
Corresponding author Mail ID: samruddhiswami2000@gmail.com

Abstract :

The term "Herbal Cosmetics" refers to products that are made using different approved cosmetic ingredients to create a basis upon which one or more herbal substances are added solely to provide specific cosmetic benefits. These products are referred to as herbal lotions. Consumer demand for herbal products sparked the demand for natural products and natural extracts in cosmetic preparations. Herbal lotions are those made from natural herbs and their products used for their aromatic value in cosmetic preparation. Liquid preparations for external application that don't cause friction are called lotions. With the aid of an absorbent substance, such cotton wool or gauze soaked in it, they are applied directly to the skin. Lotion has localized uses for protection, calming, and cooling effects.

Keywords: Aloe Vera, almond, carrot, lemon, oats, sandalwood, turmeric, papaya, honey, camphor, Neem, and herbal lotion

OVERVIEW:

Liquid concoctions called herbal lotions are applied topically to the skin to enhance or produce a cosmetic appearance. Lotions are used to remove oily discharges from the skin and wash it. It enhances skin circulation, emolliency, astringency, and freshness in addition to its other medicinal properties. Using herbal lotions typically results in no resistance. Fine splitting of the unmanageable materials is required, because particles with a colloidal size are more relaxing to inflammatory areas and more effective when applied to infected surfaces. A wide range of chemicals can be added to the mixture to improve the lotion's cooling, relaxing, drying, or protective properties or to boost its dispersion. Skin protection, sunscreen, anti-aging, anti-acne, and anti-wrinkle products are made using methods for a number of

The development of cosmetics aims to manage oil production, treat acne, and lessen wrinkles

The current study examines the properties of the herbal plants used to make herbal lotion and explores their uses and advantages in the manufacturing of cosmetics. Herbs and plants are traditionally used in Ayurvedic medicine to treat a wide range of illnesses. A skin lotion protects the skin from various environmental factors and weather conditions while also providing a calming effect.^[26]

Human Skin

The skin is the biggest organ in the body, taking up around 20 square feet of space. In addition to protecting us from germs and the outside world, skin also enables us to feel touch, heat, and cold.

Layers of Skin: The epidermis, the skin's outermost layer that serves as a waterproof barrier, determines our skin tone. The dermis, which lies beneath the epidermis, is home to sweat glands, hair follicles, and strong connective tissue

The hypodermis, or deeper subcutaneous layer, is made up of fat and connective tissue. Melanocytes are special cells that generate the pigment melanin, which is what gives skin its color. The outer layer of skin contains melanocytes..^[8]

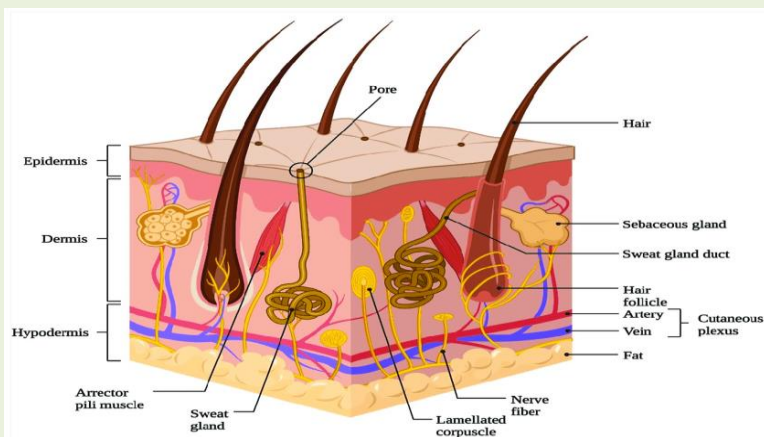


Fig no.1 Human skin

Ingredients are used in Lotion:

1. Aloe vera
2. Honey
3. Neem
4. Sandalwood
5. Papaya
6. Turmeric
7. Almond
8. Lemon
9. Carrot
10. Saffron
11. Coconut milk



Fig No 2.Aloe Vera

1. ALOE VERA

Aloe vera increases fibroblast activity, which results in the production of collagen and elastin fibres, which give skin elasticity and reduce wrinkles. Additionally, by binding together the superficially flaking epidermal cells, it has a cohesive effect that softens the skin. It possesses a restorative effect on cuts on the skin and has the capacity to hydrate and soften the skin. The moisturizing and antibacterial qualities of Aloe vera shield Honey fights bacteria because it is an antibacterial product. Honey can be extremely moisturizing and prevents bacterial infections. It reduces pores, combats bacteria, and maintains the youthful smoothness of your skin from microbial deterioration and prevents it from drying out and becoming rough. The cooling properties of aloe Vera provide a soothing sensation and prevent sunburn before it starts. This drug is applied topically to treat or prevent minor skin irritations and dry, rough, scaly, itchy skin.

Uses of Aloe Vera

Give the skin some moisture.
Facilitates faster wound healing.
Eliminate ageing skin.
Lowers acne and infection
Diminish facial imperfections.^[16]

2.HONEY



Fig no.3 Honey

Honey lessens acne's redness and swelling. It removes pollutants from the pores and regulates the buildup of dust in the skin's pores. Prolongs the hydration of skin, thereby reducing dryness. Honey helps to minimize fine lines and wrinkles by moisturizing the skin's outermost layers. It is a wound-healing substance.

Uses of Honey

- 1 Skin that glows
- 2 Heals more readily
- 3 could improve other skin conditions
- 4 Excellent hydration
- 5 Scalp cleanser
- 6 Antimicrobial^[16]

3 .NEEM



Fig no.4 Neem

Uses of Honey Neem, a member of the Meliaceae family, is frequently used as an ingredient in external cosmetics due to its antibacterial and moisturizing qualities. Neem soap can be used to prevent fungal infections or to treat minor skin infections. The primary ingredient, neem, has anti-wrinkles, anti-acne, and anti-properties that are anti-aging, anti-microbial, hydrating, and acne-reducing Native Indians in India use neem, or *Azadirachta indica*. Ayurvedic practitioners value neem for its capacity to promote healthy skin. Neem relieves rashes, itchy skin, psoriasis, scabies, dry skin, and topical skin conditions. Neem has the ability to hydrate and nourish the skin. Neem is used to treat various forms of pigmentation and acne

Uses of Neem

1. Antiseptic
2. Anti inflammatory
3. Nourish skin
4. Treats fungal infections ^[18]

4.SANDALWOOD



Fig no .5 Sandalwood

is mostly utilized for cosmetic purposes and skin care. It works wonders for pimples, rashes, and imperfections. Its cooling qualities also aid in the removal of dullness and tan referred to as Chandan in Sanskrit and Indian languages.⁶ It has cooling, astringent, deodorizing, disinfecting, stimulating, and tonic properties. Sandalwood is beneficial for skin care, as it is used as an antiseptic, skin softener, and to stimulate peripheral blood circulation in the skin. It is also useful for cutaneous inflammation. It acts as an antiseptic for acne and soothes skin irritation and itching. Great as an astringent for greasy skin.

Uses of Sandalwood

1. Anti viral
2. Antifungal
3. Antibacterial
4. Anti inflammatory ^[18]



Fig no .6 Papaya

5. **PAPAYA**

Papaya is a nutrient-rich food that offers several health advantages. Papaya is a good source of vitamin A. The influence of diet on acne is still unknown, despite the fact that vitamin A may be involved in the onset and management of acne. Papaya has been linked to a significant amount of wrinkles and skin damage. That happens as people age is caused by an abundance of free radical activity. Papaya may also lessen the appearance of wrinkles and increase skin elasticity.

Uses of papaya

- 1.It facilitates the removal of killed skin cells.
- 2.TO loss more bleeding .
- 3 It applied to heels that are sore.
4. Used to lighten skin.^[19]



Fig no .7 Turmeric

6. TURMERIC

Turmeric's curcumin is a natural colourant used in the skin care and cosmetics industries. In Indian tribes, races, creeds, and beliefs, it is frequently used topically and internally in combination with milk as a skin beautifier. Before the wedding, the bride and groom receive skin treatments with turmeric extract. rituals in different regions of Bangladesh, Pakistan, and India, with the idea that they will keep dangerous bacteria at bay and make the skin glow. It has also been demonstrated to restrict the growth of facial hair on women and prevent the growth of unwanted hair on their skin.

Uses of Turmeric

1. Lightning agent
2. Reduce dark spot and pigmentation
3. Anti aging
4. Moisturises dry skin^[17]



Fig no .8 Almond

7. ALMOND

It aids in producing smooth, soft skin, gives you skin that is incredibly hydrated without feeling heavy, keeps our skin healthy and shields it from harm in the future.

Lessen the rough, dry skin to make it clear and bright.

The hydration that almond oil offers as an emollient can aid in smoothing and moisturising skin.

Due to its light weight and lack of irritation, almond oil is usually safe for sensitive skin.

Uses of Almond

1. It could boost immunity,
2. have anti-inflammatory properties and function as an antioxidant.
3. It might have antibacterial and antifungal effects in addition to raising good cholesterol levels.
4. calm and moisturise your hair and skin^[4]



Fig no .9 Lemon

8. LEMON

Originally from Asia, the lemon (*Citrus × limon*) is a tiny evergreen tree species in the Rutaceae family of flowering plants that is native to China, Northern Myanmar, and Northeast India (Assam).

It is also known as citrus lemon

Kingdom - plantae

Family - Rutaceae

Genus - Citrus

Species - c. limon

Uses of Lemon

- 1.It possesses an antifungal attribute.
2. It aids in skin lightening ⁽⁶⁾
- 3.It also inhibits the secretion of excess oils and kills bacteria ^[16]

9.Carrot



Fig no .10 Carrot

Carrots are biennial plants that are members of the umbellifer family Apiaceae. At birth, it develops a rosette of leaves as its larger taproot grows. Fast-growing cultivars take three months (90 days) to mature once seed is planted, while slower-growing cultivars take one month longer (120 days).

The roots have been shown to have elevated concentrations of lutein, anthocyanins, beta- and alpha-carotene, and lycopene ^[5]. The roots are also an excellent source of vitamin A, vitamin K, and vitamin B6. Black carrots are one of the richest sources of anthocyanins (250–300 mg/100 g fresh root weight), having over 20–35 times more antioxidant potential than red or orange carrots and five times more than beetroot.^[6]

Kingdom - Plantae

Family - Apiaceae

Genus - Daucus

species - *D. carota*

Uses of carrot

- 1.The goal is for the body to produce more vitamin A.
- 2.Because it provides different vitamins to the human body, it is used to prevent cancer.
- 3.It makes the body's nutritional deficit worse.
- 4.It has good healing qualities for wounds.^[27]

10.SAFFRON

The source of it is the crocus sativus flower. It is thought that saffron, a scarlet thread resembling pistle, originated mainly in Greece. To treat tannedskin, one must treat the affected areas in order to brighten the skin. Saffron is used in skin whitening products to help highlight the natural radiance of the skin and brighten it.and to address skin conditions like acne. Damage ^[14]



Fig no.11Saffron

Uses of saffron

- 1.Anti-sun properties of saffron are well known for their ability to shield skin from damaging UV rays.
2. Antioxidant activity
3. Depigmenting and repairing activity
4. Antimicrobial activity



Fig no .12 Coconut milk

11. COCONUT MILK

Its smoothest skin cells are easily absorbed, and the fats keep your skin supple. It is the best moisturiser for the body, leaving the skin feeling textured and smooth. ^[11]

Uses of coconut milk

1. This is used for skin whitening
2. It leaves the skin glowing and less dry
3. Treating all skin issues without causing any negative effects, this is one of the safest and most natural remedies for sunburns.
4. Apart from treating acne and scars, it unclogs pores and aids in oil removal.

Preparation of Aloe Vera Gel

- Gather the raw materials.
- Clean the leaf and cut off the base and tip.
- A leaf is divided into sections.

The mucilage portion of the leaves should be extracted and placed in a mixing jar. Agar-agar powder should then be added and heated.

- Homogenization and grinding of unpasteurized juice.
- Include vitamin E and thoroughly combine.
- Store and package the gel that has been created. ^[28]

Formulation Table

Sr.no	Name of components	Amount
1.	Aloe vera gel	10 ml
2.	Coconut milk	5 ml
3.	Honey	5 ml
4.	Saffron	3 ml
5.	Almond oil	2 ml
6.	Rose water	2 ml
7.	Vitamin E	2capsule
8.	Glycerine	3 ml
9.	Loveender oil	4 drops

Technique for Making Herbal Lotion

1. As directed by weigh each ingredient.
2. In a different, clean beaker, Alovera gel was added, and it was stirred until it took on a slightly creamy consistency.
3. After that, it was mixed with honey and saffron extract.
4. Next, a second beaker was filled with almond oil, lavender oil, and vitamins. Glycerin was added along with capsule oil.
5. The first beaker was then filled with this oil solution and thoroughly mixed.
6. Once all the ingredients were combined, rose water and coconut milk were added based on consistency.



Fig no .13 herbal lotion

General method for preparation of Herbal Lotion Constituents combined components at a low temperature (20° c) After mixing, let the ingredients sit for 20 hours Inspection of quality enclosed within bottles Keep and sell

Pharmaceutical preparation of Lotion:

Lotions are lubricating liquid preparations intended for external application.

1. They are applied directly to the skin with the help of an absorbent material (such as gauze or cotton wool soaked in it).
2. It is not advisable to apply lotions on broken skin as they may result in severe irritation. The insoluble substance ought to be separated into tiny pieces for making lotions. Add to it some bentonite, a suspending agent.
3. It is applied for germicidal, astringent, and antiseptic purposes, such as in aloe vera lotion.

Because of its calming and cooling properties, alcohol is occasionally added to aqueous lotions.

The process of making lotions involves Adding the leftover liquid phase after first triturating the components into a homogeneous paste.

Evaluation Test :

1. Appearance : A visual inspection was used to assess the lotion's look
2. Color : Visual inspection was used to determine the cream's colour.
3. Odor : We smelled the lotion to determine its scent.

4. Spreadability: The formulated lotion's spread ability was evaluated by sandwiching a sample between two slides and compressing it to a consistent thickness for a predetermined amount of time using a specific weight.
5. Irritancy Test : A particular area of the left hand's dorsal surface received an application of lotion. A 24-hour period was observed and reported for irritability, erythema, and oedema.
6. Removal Test : By using water to wash the area where the cream was applied, the cream's ease of removal was assessed.
7. Stability Test : Following the placement of the formulation in the center of the petri dish, the plates were incubated at 37°C for 72 hours in order to track the development of the microbes.

IDEAL PROPERTIES OF HERBAL LOTION :

1. When applied, they ought to have a cooling effect.
2. Particles ought to be absent from them.
3. Emollient effect is what they should do.
4. Upon application, they ought to eliminate the greasy discharge.
5. On the skin's surface, they ought to disperse evenly.
6. Their pH should be in harmony with that of the skin.^[24]

LOTIONS BENEFITS:

1. Hydrate parched skin again.
2. Rehydrate any particularly dry or rough skin areas.
3. Smooth calluses.
4. Have a pleasant scent and feel.
5. Take a moment to unwind.
6. Gently massage the abrasive areas of your body.
7. Get a radiant complexion.

Appears unappealing, and hand and body lotion is particularly effective on the hands and feet but can be used on the entire body. As millions of users attest, body lotion offers numerous advantages to those who schedule regular application times.^[22]

Advantages of Herbal Lotion :

1. These outperform other tiny-quantity cosmetics in terms of effectiveness.
2. Plant extracts have the right pharmacological effects while reducing the bulk properties of cosmetics.
3. Accessible and present in a wide range of plant species.
4. When it comes to their herbal ingredients, they are more stable, pure, and effective.
5. Easy to manufacture
6. It is simpler to handle and keep herbal cosmetics for a longer amount of time and Low price.^[23]

FINDINGS AND CONVERSATION:

Following their preparation, the herbal gel and body lotion were assessed using a variety of parameters. The infusion of herbs was green. Throughout the trial, the pH ranged from 5 to 6, which is within the typical range for skin pH. When applied to the skin, the gel did not irritate it.

After a six-month testing period, the stability test results showed that all lotions had improved stability. Under typical storage circumstances, the preparation held up well.

According to these findings, the topical area was not negatively impacted by the herbal lotion. Research has demonstrated the anti-inflammatory properties of this herbal remedy.

CONCLUSION:

This investigation involved the synthesis of a herbal lotion and evaluated it according to physiological criteria (pH, spreadability, ease of removal, and irritancy test) and organoleptic features (look, color, and fragrance).

In this work, herbal extracts are the main focus. Donate the nutrients that your skin needs to stay healthy. Natural skincare products can benefit from the various applications of various herbs that are readily available. These include antioxidants. Compared to marketed cosmetics, the results of this study showed that herbal cosmetics are much safer and do not cause any harmful or unfavorable reactions. We won't have skin issues thanks to herbal lotion.

REFERENCES:

1. Echech Olaniyan A, Ajala E, Akubude-, Egwuonwu C, Azalea O, et al. Almond oil: a nutritional powerhouse Nigerian soil utilization patterns Check out the Biodiesel project. Nutrient powerhouse: almond oil (Project View). 2020. 22, 3, 190–201.
2. Abhijit S. Khot, Surekha S. Tayade, Nikita M. Rathi, Shital V. Sirsat, and Akshay C. Deshmukh, Formulation and Standardization of Herbal Lotion 2022,7,13,608-613.
3. Namita and Nimisha Development and Assessment of Herbal Cosmetic for Skin Care International Journal of Pharmacology and Bioscience, 2013.4,1,86–92
4. Mukopadayay, S., Banerjee, D., and Kumar, M. An overview of the creation and assessment of herbal body lotion, International Journal of Health Science 2022 .6,4,13342–13349
5. Pradeep Soni, Jitendra, Shalini Parashar, Pawan Rajput, Rahul Kumar Gupta, and Shrivastava ,Review of commercially available cosmetic ingredients and the potential of medicinal plants and herbs in cosmetic formulations. International Journal of Innovative Science and Technology, 2018.3, 4,70–73.
6. Abid Hussain, Mr. Ayush Garg, Nisha Devi, Arvind Kumar, and Rajesh Khathuriya An analysis of herbal cosmetics, World Journal of Pharmaceutical Sciences, sciences January 2018.32,2,34-52.
7. Vani Mamillapalli, Amukta Malyada Atmakuri, Padmalatha Kantamneni, Nanoparticles of herbal extracts, Asian Journal of Pharmaceutics, Apr-Jun 2016, 10,2, 50-55 .
8. Sanjida Afrin, Ishrat Jahan, et al, Novel approaches of herbal drug delivery, Journal of pharmaceutical research international, 2018,21,5,3-7.
9. Saudagar R. B. 1 and Sisodiya M. H., Review on Herbal Cosmetics, World Journal of Pharmaceutical Research, 2009. 7. 7, 573-591.
10. SNH Shah. Effect of Permeation Enhancers on the Release Behavior and Permeation Kinetics of Novel Tramadol Lotions Tropical Journal of Pharmaceutical Research February 2013.12 ,1,27-32.

11. N. M. Saptarinil, and G. Hadisoebroto, Formulation and Evaluation of Lotion and Cream of Nanosized Chitosan-Mangosteen (*Garcinia mangostana* L.) Pericarps extract Rasayan J. Chem 2020.13,2, 789-795
12. Dr. Sweta Srivastava Koka, Ms. Surpriya Shidhaye, Handbook of Experimental- Herbal Drug Technology, S. Vikas & Company- Medical Publishers, Editio 2020,2,13, 16-19.
13. Vishakha Shinde; Kundan Tiwari; Formulation and Evaluation of Lemongrass Lotion International Journal of Pharmacy, O2 2012.13, 2,620-625.
14. Priyanka Sharma, Amit C Kharkwal, Harsha Kharkwal, MZ Abdin, Ajit Varma. A review on the pharmacological properties of Aloe Vera. Int J Pharm Science International Journal of pharmaceutical sciences Review And Research 2014.29, 31-7.
15. Radha, M. H., Laxmipriya, N. P. Evaluation of biological properties and clinical effectiveness of Aloe vera: A systematic review. Pharmacognosy Review, 2015 9(18), 120–126.
16. Alvarez-Suarez, J. M., et al. Antioxidant and antimicrobial capacity of several monofloral Cuban honeys and their correlation with color, polyphenol content, and other chemical compounds. Food and Chemical Toxicology, 2010 48(8), 2490-2499.
17. Khalil, I., & Sulaiman, S. A. The potential role of honey and its polyphenols in preventing heart diseases: a review. African Journal of Traditional, Complementary and Alternative Medicines 2010, 7(4), 315-321.
18. Bhattacharyya, N., & N. K. Chakravarty. Sandalwood: History, Uses, Present Status and the Future. Current Science, 1999, 77(1), 44-50.
19. S K Bais, P V Ghatage, Herbal Excipient and Novel Drug Delivery System Used in Liposome and Ethiosome International Journal of Creative Research Thoughts Volume February 2023 11 (2) 724.
20. J P Lavande S K Bais Balika Ashok Nagane Novel Drug Delivery System International Journal of Advanced Research in Science Communication and Technology 202.5,11,2581-9429
21. SD Sonawane S K Bais SA More Novel Drug Design International Journal of Advanced Research in Science Communication and Technology 2023 .3,1 ,2581-9429.
22. Amol Pore Sanjay Bais Roshan Navanath Galave Novel Herbal Drug Delivery System Its Analytical Aspects and Applications International Journal of Creative Research Thoughts 2023.11, 2,2320-28830.
23. Praveen V Patil Sanjay K Bais Ganesh V Gudge. Review on Novel Herbal Drug Delivery System International Journal of Advanced Research in Science Communication and Technology 2013, 3, 14,245-250.