



A Review of Butterfly Pea flower Moisturizers; History, Preparation, Characterization and Evaluation Test

Apurva K Shelar⁽¹⁾, Mohini Patil⁽²⁾, Meenal Patil⁽³⁾, Pooja Patil⁽⁴⁾, Suraj Patil⁽⁵⁾
Surbhi Patil⁽⁶⁾

¹ Assistant Professor, Department of Pharmaceutics

^{2,3,4,5} Student, Bachelor of Pharmacy

Sinhgad Institute of Pharmaceutical Sciences, Lonavala

ABSTRACT: Moisturizers are one of the most used preparations in cosmetics and have been extensively used to soften the skin for consumers. Herbal cosmetics cream is the formulation that are used to protect and nurture a person's look. A semi-solid product for enhancing skin tone is a moisturizing cream. Compared to synthetic creams, herbal creams provide several benefits. The aim of the project research study was to formulate the herbal moisturizer cream using different herbal plants such as Butterfly pea flower, Cucumber, Tulsi along with Glycerin, Bee wax, rose oil, Almond oil, liquid paraben, Methyl paraben and Distilled water and evaluate for various by physical appearance, pH, spreadability, wash ability, Greasiness, irritancy, etc. Compared to synthetic creams, herbal creams provide several benefits.

Keywords: Moisturizer API, Top 10 moisturizers, herbal product, Asian pigeon wings.

Introduction: Moisturizer cream are used on normal and dry skin. It helps to protect the skin from wrinkle, skin aging, acne, remove tan and make glowing skin. Moisturizer cream are semi solid emulsion like a milky moisturizer with gel like consistency. Moisturizer emulsion are in water based rather than oil based they make it good product which is suitable for all types of skin and helps for sensitive skin. Creams helps for skin shines. Creams helps to fight acne, remove tan, treat scars. Moisturizer is a cosmetic preparation used for protecting, moisturizing and lubricant the skin. Butterfly pea flower is the active ingredient which helps in skin repair keep skin glowing, extremely rich in anti oxidants and in rare. it is easily to washable. it protect the skin for long time.

Advantages

- Using this moisturizer can help prevent wrinkles.
- Not as oily as some other creams.
- Keeping your skin moisturized keeps it youthful.
- When compared to manufactured cosmetics, they are incredibly effective in small quantities.
- Hydrate skin
- Make skin glow and shine

Disadvantages

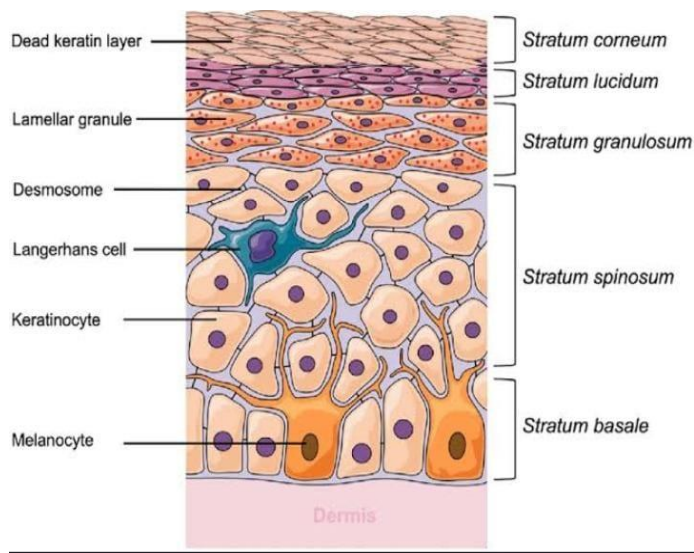
- Herbal medications take longer to take effect than natural dosage forms.
- Additionally, ongoing treatment is needed.
- The manufacturing process is intricate and taking time.
- The majority of natural medications are difficult to find.
- Taste and smell are tough to disguise.
- Not as long-lasting as moisturizers

Skin

The human skin is the largest body organ in the body. An additional name for it is the integument. It makes up 16% of the body weight as well as has a location of 1.8 m. The key duty of skin is to function as a barrier in between the inner plus outside settings throughout the careful inbound and also outward flow of water, electrolytes plus various other compounds. Moreover it uses protection by avoiding microorganisms from getting in. UV radiation harmful chemicals as well as deterioration from equipments.

The adhering to layers make up the thick, safety layer of skin on the body:

1) Epidermis: This layer of stratified squamous epithelial cells which does not have capillary, is the external covering. Keratinocytes (cells) comprise most of the skin. The keratin healthy protein is generated by these keratinocytes. Healthy protein frameworks called desmosomes function as keratinocyte bridges. These keratinocytes are constantly moving in the instructions of the skin's edge. The density of the skin can vary from 0.05 mm at the eyelids to 0.8-1.5 mm on the hands of the hands and also soles of the feet. The several advancement phases enable the skin to be additional separated right into 4 different layers made up of keratin.



i) Stratum basale: The inmost layer of the skin called the stratum basale, lies straight over the dermis plus is comprised of both splitting and also non-dividing keratinocytes. The small frameworks called hemi desmosomes compose the internal basal surface area of epidermal hearation cells. These keratinocytes slowly move towards the top surface area as an outcome of department together with distinction. Melanin a pigment made by melanocytes makes up basal cells.

ii) Stratum Spinosum: The complying with layer referred to as stratum spinosum is created by the fully grown cells from stratum basale relocating up. Desmosomes are intercellular bridges that connect the cells in this layer. These desmosomes have a "" prickle"" look at the tiny degree. Tree-like Langerhans cells which come from the bone marrow, remain in the stratum spinosum. In skin-related immunological responses Langerhan's cells are important. The cells' cytoplasm has a rough look.

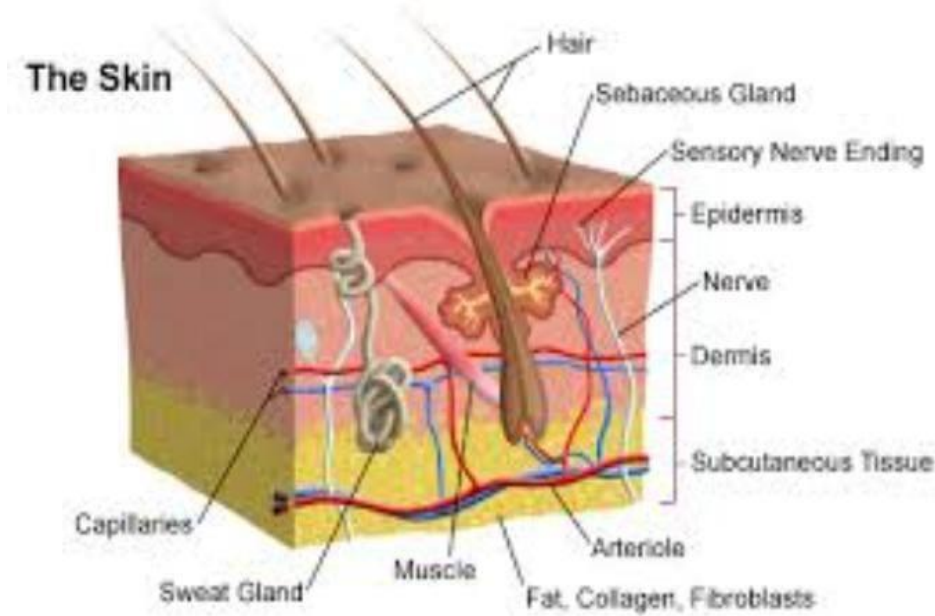
iii) Stratum Comeum: The Comeum is composed of several layers of corneocytes non-viable, hexagon-shaped cells that have actually been cornified. These corneocytes are keratinocytes in the lasts of growth. The comeocytes create around 10-30 layers in practically every component of the skin: however the thickest layers are discovered in the hands and also soles. Every corneocyte is confined by a healthy protein covering which is full of keratin healthy proteins having water preserving residential or commercial property. The major toughness to stratum comeum is given by the form of the cells plus alignment of keratin healthy proteins. The comeocytes are sandwiched in between the piled layers of bi-layered lipid in the extracellular area.

2) Dermis:

The dermis is the middle layer of the skin. The dermis contains:

- Blood vessels
- Lymph vessels
- Hair follicles
- Sweat glands
- Collagen bundles

3) Subcutaneous: The subcutaneous, a layer of loosened connective cells, is the last layer on which the dermis relaxes. Fat cells is strewn throughout the shallow fascial sheath (panniculus adiposus). The fat cells disperses tensions from straight influence and also participates in thermoregulatory systems while the fascia lessens rubbing in between the dermis and also much deeper musculature. The circulation of shallow fat cells differs geographically due to the fact that individuals that reside in chillier areas generally have extra fat on their bodies than individuals that reside in warmer setups. Nonetheless an individual's subcutaneous fat material gives details concerning their lipid get as well as a result their nutritional fat consumption.



- **Collection of plant material:**

Butterfly pea flower, Tulsi leaves, were collected from the local botanical garden in Lonavala.

- **Butterfly pea flower**



- **The butterfly pea:** *Clitoria ternatea* (Family: Fabaceae) is one of the traditional medicinal plants used as “Shanka Pushpi” an Ayurvedic medicine used to boost or enhance neurological health. The plant contains alkaloid, flavonoid, taraxerol, taraxerone, triterpenoid and anthocyanin as active chemicals that bring about its biological effects. Its extracts possess a wide range of pharmacological activities including antibacterial, anti-diabetic, anti-diarrheal, anti-fungal, anti-helminthic, anti-inflammatory, antimicrobial, antioxidant, and antipyretic activities, hypolipidemia, immunomodulatory, and wound healing. This review is an attempt to compile information on various ethnomedicinal uses of memory boosting herb, butterfly pea, *Clitoria ternatea*
- **Cucumber:** *Cucurbitaceae* is a plant family, also known as gourd family, which includes crops like cucumbers, squashes, luffas and melons. Cucurbits form an important and a big group of vegetable crops cultivated extensively in the subtropical and tropics countries. The family consists of about 118 genera and 825 species. Plants of this family have many medicinal and nutritional benefits. Cucumber (*Cucumis sativus*) is one of the monoecious annual crops in the Cucurbitaceae family that has been cultivated by man for over 3,000 years. With respect to economic importance, it ranks fourth after tomatoes, cabbage and onion in Asia.



- **Tulsi:** Tulsi is a part of (family Lamiaceae) synonyms *Ocimum sanctum*, *ocimum tomentosum*. Tulsi is a great choice for addressing skin concerns like acne and skin irritation due to its anti-inflammatory, antiseptic, and antibacterial properties. Furthermore, its moisturizing and hydrating properties help to keep the skin looking and feeling soft, supple, and nourished.



- **Almond oil:** The *Prunus dulcis* is the source of almond oil. Nearly 78% of this fat is found in almond oil. Extremely little levels of super-unsaturated Omega-3 necessary fatty acids are present in this oil. It turns out to be incredibly nutritious, strengthening and softening the hair. Additionally, almond oil works incredibly well as a cleansing agent. Before almond oil became well-known as a commercial agricultural product, it was used for many centuries.



• **GENERAL METHOD FOR PREPARATION OF HERBAL MOISTURIZER**

Material and method(O/W,W/O)

Add the required quantity of ingredient in sufficient amount of base water and prepare a solution by heating on water bath

In the above solution,add required quantity of Herbal extract

Add solution,drop wise into solution2.when both the phases get mixed properly, add methyl paraben as preservatives.

The formulated polyherbal Moisturizer was kept aside for about an hour in cool and dry place indirect to sunlight till it sets completely and was used after 48 hours after keeping at room temperature for stability and analytical testing

Packed in container and store in cool place

• **Excipients and herbal ingredients with their roles:**

Table 1: Role of ingredient

S. No.	Ingredients	Roles
1)	Butterflypea flower	Helps ease skin irritation and itching.
2)	Cucumber	Astringent, lightening and effectively Treating dark spots.
3)	Tulsi	Antibacterial, adds glow to the face. relieves skin dryness, itching and redness.
4)	Bees wax	Emulsifying agent, stabilizer and gives thickness to the cream.
5)	Liquid paraffin	Lubricating agent
6)	Borax	Alkaline agent which reacts with emulsifying agent to form cream.
7)	Methylparaben	Preservative Fragrance

EVALUATION TESTS OF CREAM:

- Physical evaluation:** This essentially involves examining the cream's colour, texture, stability, and smell.
- Irritancy:** This is used to assess the materials' quality and chemicals' potential for harming the skin and mucous membranes. The dorsal surface of our left hand must first be marked. The cream formulation must then be administered to that region, and the time must be recorded. After a few minutes, we must let the formulation sit so that we may check for irritation.
- Washability:** The quality of the cream is also assessed using this test. First, a small amount of cream that was applied to the hand must be added. Next, we need to use a tap to wash. For this we have to put cream in a closed container at a temperature (30 – 80 °C). Keep this formulation away from light.
- Spreadability:** The results of the spread ability test indicate that the cream's formulation provides good spreadability.
- Grease:** The main purpose of this test is to identify if cream has an oily or greasy texture. The findings indicate that none of the formulations were greasy.
- pH test:** This basically describes the acidity of various chemicals. Typically, the pH (cream) range falls between 4 and 7. The test's results were measured using either a digital pH metre or pH paper.

- 7) **Homogeneity:** The test and visual appearance were used to assess homogeneity.
- 8) **Phase separation:** This test is typically performed every 24 to 30 hours. To do this, heat the cream in a closed container to a temperature of 30 to 80 degrees Celsius. Don't expose this mixture to light.

REFERENCE

- 1) Gujjar R. , Dr.Sharma H. , Sharma A. , Sharma M. , Shreyasi, Vyas G. K. (2023) 'A REVIEW ON HERBAL CREAM AND SOME PLANT USING FOR HERBAL CREAM FORMULATION' , International Journal of Creative Research Thoughts (IJCRT), Volume 11
- 2) Navindgikar n., Kamalapurkar k. a. , (2020) CHAVAN P. 'FORMULATION AND EVALUATION OF MULTIPURPOSE HERBAL CREAM' International Journal of Current Pharmaceutical Research, Vol 12
- 3) Dr. kamla P, dr, Ankur V, ' TEXT BOOK OF COSMETIC SCIENCE NIRALI PRAKASHAN '
- 4) Kosai P. ,Sirisidthi K. ,Jiraungkoorskul K., Jiraungkoorskul W. (2015)'Review on Ethnomedicinal uses of Memory Boosting Herb, Butterfly Pea, Clitoria ternatea, JOURNAL OF NATURAL REMEDIES, Vol 15 (2)
- 5) Saeed H., Waheed A. (2017), 'A REVIEW ON CUCUMBER (Cucumis Sativus)' International Journal of Technical Research & Science, Volume 2 Issue VI
- 6) Formulation and Evaluation of Herbal Fairness Cream Comprising Hydroalcoholic Extracts of Pleurotusostreatus, Glycyrrhizaglabra and Camellia sinensis by Nirmala Gupta, Aditi Dubey,
- 7) Pushpa Prasad, Amit Roy. UK Journal of Pharmaceutical and Biosciences, Vol. 3(3), 40-45, 2015. 12. Formulation and evaluation of herbal body lotion A review (2022) by Dip Banerjee, Dr. Sayantan Mukopadaya. Mahitkumar (2022). International Journal of Health Sciences, 6(52), 13342- 13349.
- 8) Formulation and evaluation of multi purpose herbal cream(2020) by Nikhil Nitin Navindgikar", K. A Kamalapurkar, Prashant S. Chavan. International Journal of Current Pharmaceutical Research ISSN-0975-7066.
- 9) Assessment of viscoelasticity and hydration effect of herbal moisturizers using bioengineering 14
- 10) (2010) by Shweta Kapoor, Swarnlata Saraf. Institute of Pharmacy, Pt. Ravishankar Shukla University, Raipur (C.G), 492010, India.
- 11) Formulation and evaluation of multi purpose herbal cream (2019) by Archana Dhyani,
- 12) Vikas Chander, Dr. Nardev Singh. Journal of Drug Delivery and Therapeutics, 16. Formulation and evaluation of post laser herbal cream by Sakshi Sharma, Neeru Vasudeva, Sumitra Singh, Sneha Das. Department of Pharmaceutical Sciences, Guru Jambheshwar University of Science and Technology, Hisar, Haryana, India
- 13) Gite Shital S., Jadhav Aishwarya J., Zalte Amar G., Saudagar Ravindra B. (2013) 'A Review on Oils used in Herbal Cosmetics', Research Journal of Topical and Cosmetic Sciences, Volume 4 Issue II