



## **FORMULATE AND EVALUATE NATURAL MOISTURIZING CREAM**

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### **ABSTRACT:**

The allopathic medical system, the traditional medical system, which developed throughout the millennia, was responsible for providing all forms of healthcare worldwide. It is an arduous undertaking to formulate a moisturizer with all natural or synthetic ingredients with Shata-Dhauta-Ghrita as the base. The creation of a moisturizer employing Shata-Dhauta-Ghrita as a base and their assessment are the goals of the current effort. An ayurvedic concoction called Shata-Dhauta-Ghrita (SDG) is used to heal wounds, burns, chicken pox, scars, herpes, leprosy, and other skin conditions. It is also used as a carrier for topically applied medications. The formulations underwent a battery of evaluation testing, including pH, consistency, homogeneity, spread-ability, irritancy, sensitivity, bleeding, removal, and stability tests. Stability analyses. The evaluation of all the criteria revealed that the formulation produced in the lab produces outcomes that are generally comparable to, if not better than, the formulation sold in stores. Thus, it was discovered that the chosen lab-made formulation was of high quality. In particular, many formulations of water in oil (W/O) cream were created by combining various constituent concentrations. Every formulation was assessed using a variety of criteria, and stability was looked at. It is safe to use these formulations on skin. According to these research, the moisturizing cream of F1 contains a base of Shata-Dhauta-Ghrita, which is safer and more stable and may have synergistic effects.

**Keywords:** Formulation, Ghee, Shata-Dhauta-Ghrita, Moisturizer

### **INTRODUCTION:**

Over the decades, the ayurvedic medical system has developed to fully address global healthcare needs. The ayurvedic medical system is very extensive. Acharya Charaka lays out the uses of ghee in detail. It aids in memory, intelligence, semen, kapha (one of the three bio-energies primarily responsible for cohesion), ojas (bioessence of life), and medas (adipose tissue). Agni is the factor responsible for digestion, metabolism, and biotransformation. It relieves fever, insanity, phthisis, poisoning, and vata, one of the three bio-energies primarily responsible for heat. There are various contemporary cream bases available for topical formulation development [1]. Their components, which lack any therapeutic action, such as liquid paraffin, stearic acid, and beeswax, are known for their inertness. Still, an Ayurvedic foundation such as cow ghee.

### ***Natural Moisturizing Cream Benefits***

1. Prevents skin aging.
2. Aid in keeping the skin's moisture balance intact.
3. Protect skin from harsh surroundings.
4. Maintain safe and hydrated skin.
5. The purpose of cold creams is to smooth the skin and remove makeup.
6. Applied as a topical medication dose form to address skin conditions.
7. Give the skin an oily protective layer and emollient action.
8. Simple to use.
9. Minimal or non-existent likelihood of medication level fluctuations.
10. No specialized training is needed for product application. That is, simple to utilize.
11. Achieving efficacy while reducing the total daily dosage of medication.
12. Excellent adherence to treatment Premium benefits

**Anatomy of Skin:**

The skin is the biggest organ in the human body. It completely envelops the body. It acts as a barrier to keep out heat, light, damage, and infection. The skin controls body temperature as well. Holds fat and water in reserve. Is an organ of senses stops water loss Keeps microorganisms from entering and serves as a barrier between the organism and its surroundings helps the body produce vitamin D when exposed to sun light. Everywhere on your body, your skin changes in thickness, color, and texture. For instance, there are more hair follicles on your head than anywhere else. However, your feet's soles are devoid of any.

Furthermore, the skin on the palms of your hands and the soles of your feet are significantly thicker than the skin on other parts of your body. Three layers make up the skin. Every layer has a certain purpose.

1. The skin
2. The dermis
3. The layer of subcutaneous fat (hypodermis)
  - **CREAM:** What Is It? Oil-in-water, oil-in-oil, or any other kind of water-washable basis can dissolve or distribute one or more medicinal ingredients, resulting in semisolid preparations known as pharmaceutical creams.
  - **MOISTURIZING CREAM:** A moisturizer, also known as an emollient, is a cosmetic preparation that hydrates, lubricates, and protects the skin. The sebum that healthy skin produces typically carries out these tasks. Preparation that lubricates, moisturizes, and protects the skin. The sebum that healthy skin produces typically carries out these tasks. The Latin verb mollire, which means to soften, is where the word "emollient" originates.

**Purpose:** "TO CONCODE AND ANALYZE NATURAL MOISTURIZING CREAM."

1. To use the emulsification procedure to prepare the cream.
2. To assess the natural moisturizing cream's quality, safety, and effectiveness.
3. To ascertain whether moisturizing creams do not cause skin irritation when used.
4. To examine and present a variety of facets of conventional Indian herbal medicine.
5. To use the knowledge acquired during the course to assess a formula's usefulness.
6. To create and assess a cosmetic natural moisturizing lotion with natural herbal elements for skin that glows.
7. To create a moisturizing cream that works for every type of skin.
8. To determine the practical advantages of moisturizing cream for use by people as a cosmetic.

**PLANT PROFILE:****1. GHEE:**

**Synonym:** ghee, tup

**Biological Source:** - ghee is obtained from milk using extensive procedure including fermentation of boiled milk (with cream included) with curd containing Lactobacillus followed by churning of the yoghurt hence obtained.

**Chemical Constituents:** Vitamins: vitamin A, vitamin D , vitamin E , vitamin K , phospholipid Enzyme: Lipase enzyme Vitamins, carbonyls, hydrocarbons, carotenoids. caprylic, caprice like butyric, caproic, caprylic, capric, Lauric myrestic, palmitic, stearic, oleic, linoleic, linolenic acid



**Fig.1 Ghee**

**Uses:**

- Helps in the moisturization of skin and gives it a shiny effect.
- Helps Digestive System. Ghee consumption is strongly related to a healthy gut.
- Strengthens Immune System.
- Source of Essential Vitamins.
- Anti-inflammatory and Anti-cancer.
- Boon for Lactose Intolerant.
- Treats Burns.
- Healthy Skin.

## 2. TURMERIC POWDER

**Synonym:** *Curcuma longa*

**Biological Source:** Turmeric is the dried rhizome of *Curcuma longa* Linn. (syn. *C. domestica* Valetton)

**Family:** Zingiberaceae



**Fig. 2 Turmeric powder**

**Chemical Constituent:** Curcumin, Curcuminoid Bisdemethoxycurcumin, Germacrone, Desmethoxycurcumin curcumol vanillylidene acetone, Curcumenol, mono and sesquiterpenes, zingiberene,  $\alpha$ -phellandrene, sabinene, turmerone, arturmerone, borneol, and cineole.ingiberene, Bisabolene, Elemene, Bisacurone, curcumene

**Uses:**

Lightens and adds a natural glow to the skin. Eliminates microorganisms to treat outbreaks of acne. Aids in the treatment of atopic dermatitis, a form of eczema.  Reduce the rate at which free radicals damage skin. Assist with the inflammatory chronic psoriasis.

## 3. ALOE VERA

**Synonym:** *Aloe barbadensis* Mill, *Aloe indica* Royle, *Aloe perfoliata* L. var. *vera* and *Aloe vulgaris* Lam.

**Biological Source:** Aloe is the dried juice collected by incision, from the bases of the leaves of various species of Aloe.

**Family:** Liliaceae



**Fig.3 Aloe vera**

**Chemical Constituent:** Vitamins - A, S. E. B1, B2, B3, B6, B12 and Folic acid. Enzymes – Amylase, Lipase, Catalase Brady kinase. Minerals – Calcium, Magnesium, Zinc, Iron, Selenium. Sugars – Mannose, Glucose, Acemannan. Barbaloin, Aloesin, Aloin

**Uses:**

Relieves sunburn;  Aids in lightening dark areas. Skin is moisturized. Gives skin benefits for healthy aging. Assist in clearing up acne. Prevents and cures dandruff.

#### 4. SAFFRON

**Synonyms:** Saffron, hay saffron, kesar

**Biological Source:** dried stigmas and upper parts of styles of *Crocus Sativus*

**Family:** Iridaceae

**Chemical Constituent:** Crocin, Picrocrocin and Safranal.

**Uses:**

- Hyperpigmentation
- Antioxidant
- Skin Brightening
- Dermatitis
- Skin Tone Enhancement
- Inflammation
- Ultraviolet
- Skin lightening
- Skin sensitivity  Heals scars and acne

#### 5. ALMOND OIL

**Synonym:** *Prunus dulcis*

**Biological Source:** Almond oil is a fixed oil obtained by expression from the seeds of *Prunus amygdalus*.

**Family:** Rosaceae



**Fig. 4 Almond oil**

**Chemical Constituent:** Glycerides - Oleic Acid, Linoleic Acid, Palmitic Acid, Myristic Acid, Palmitoleic Acid, Margaric Acid, Stearic Acid, Linolenic Acid, Benzaldehyde, Hydrocyanic acid

**Uses:**

- Extremely gentle, leaving the skin feeling silky and smooth after use. Emollient, it protects the skin from drying out and nourishes it. It revitalizes and restores skin. It relieves inflammation

#### 6. ROSE OIL

**Synonym:** Crane's-bills, Pelargonium, Rose g. oil

**Biological Source:** Obtained by steam distillation from fresh leaves & stem of *Plergonium graveolance*

**Family:** Roseace

**Chemical Constituent:** phenylethyl alcohol, geraniol, citronellol, nerol, farnesol and small quantities of eugenol, and eugenol acetateammation and itching.

**Uses:**

- , Rejuvenate, balance, and enhance skin texture. To create a personalized anti-aging oil blend for your skin minimizes dark areas. Antiseptic.

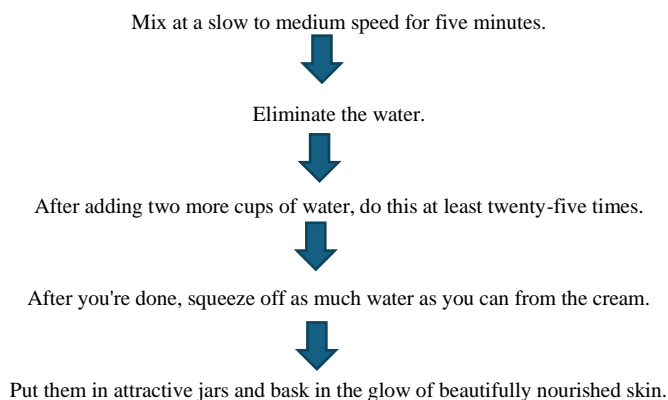
#### **FORMULATION OF NATURAL MOISTURIZING CREAM:**

Heat ghee until it becomes a liquid, but avoid heating it too much.



Add two cups of water to a mixing bowl with the ghee.



**FORMULA**

SR. NO.	MATERIAL	ROLE	QUANTITY
1	GHEE	Cooling and soothing effect	30 ml
2	Turmeric Powder	Cooling and soothing effect	1 ml
3	Aloe Vera	Reduce cold sore and inflammation as well as moisturizer	10 ml
4	Saffron	Antioxidant	1 gm
5	Almond Oil	Moisturizer and emollient	5 ml
6	Rose Water	Hydrate and refresh skin	3 ml
7	Perfume (vanilla)	Flavouring agent	Q. S
8	Water	Cooling sensation	Q. S

**Table: 1 Formulation of Natural Moisturizing Cream****Fig. 5 Formulation of Natural Moisturizing Cream****EVALUATION OF NATURAL MOISTURIZING CREAM:**

A Morphological Assessment 1. Physical characteristics: The color, smell, and look of the moisturizing lotion were noted. 2. Homogeneity: Both touch and visual appearance were used to verify the homogeneity of the formulation. B. Analysis of Physicochemical Data:

1. Measurement of pH: Using pH paper, standard pH was used to calibrate the paper.
2. Appearance: The cream's color, peach-scented hue, roughness, and grading were used to assess its appearance.
3. To assess irritability, mark a square centimeter on the left hand's dorsal surface. The designated area was covered with the cream, and the time was recorded. For a full day, any erythema, edema, or irritability was noted and recorded at regular intervals.
4. Determining spread ability: The area to which a topical application spreads when applied to the skin's afflicted areas can be used to describe spread ability. The formulation's spreading value affects how effective it is as a medicine. A 2g sample was placed between two glass slides, and after 5 minutes, the samples were squeezed together to create a uniformly thick film using a 1000g weight. After adding 10 grams of weight to the pan, the top plate was



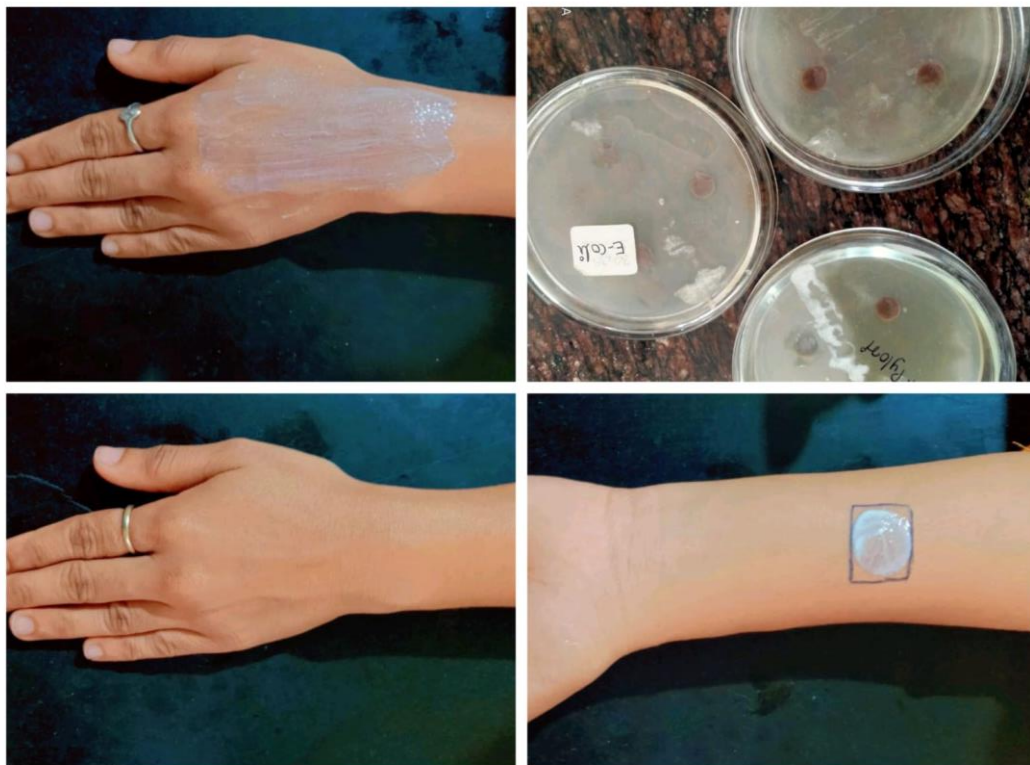
pulled with the aid of a string that was fastened to the hook. The duration of the upper glass slide's movement across the lower plate to cover 10 cm. The formula  $S = m \times L/T$  can be used to determine the spread ability (S). S stands for spread ability, m: Weight fastened to the top glass slide length that was adjusted on a glass slide. Three readings were taken in triplicate to determine the t-time, and the average of the three was recorded.



5. Microbial growth test: After preparing the agar medium, the prepared cream was inoculated using the streak plate method on the agar media, and a control was made by leaving out the cream. The plates were put in the incubator and left there for a whole day at 37°C. Following the incubation time, the plates were removed, and the microbial growth was examined .

6. Washability: After applying the lotion to the hand, it was examined while it was running.

7. Patch test: A small amount of substance (about 1-3 grams) was applied to the skin behind the ears, a sensitive area of the body, using a piece of cloth or a funnel. One square meter of skin was treated with the cosmetic under test. Additionally, control patches were used. After a day, the patch location is



examined.

9 Removal: The ease of removal of the cream applied was examined by washing the applied part with tap water.

**RESULT AND DISCUSSION :****1. ORGANOLEPTIC EVALAUTION**

SR.NO.	PARAMETER	OBSERVATION
1	Colour	Light yellow
2	Odour	Sweet buttery
3	Appearance	Smooth
4	Texture	Smooth

**Table 2: Organoleptic Parameters****2. PHYSIOCHEMICAL EVALUATION:**

SR. NO	PARAMETER	OBSERVATION
1	pH	5 to 7

**Table 3: physiochemical parameters****3. IRRITANCY TEST:**

SR.NO.	PARAMETER	OBSERVATION
1	Irritation	No
2	Redness	No
3	Swelling	No

**Table 4: Irritancy Test****CONCLUSION :**

The personal care system has seen a multiplication in the usage of cosmetics. The use of bioactive substances in cosmetics affects the skin's biological processes and supplies the nutrients required for healthy skin. Consequently, it can be said that throughout the study period, the produced formulation demonstrated high consistency, good spreadability, and no signs of phase separation. Stability characteristics such as formulations' visual appearance, nature, and scent revealed no discernible variation throughout the course of the trial. It is feasible to create creams utilizing Shata Dhauta Ghrita (100 times washed) according to the study mentioned above. The findings of various cream testing indicated that the substance may be applied topically to shield skin against

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