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Review on Formulation Strategy of Herbal Moisturizing Cream

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ABSTRACT

Ayurvedic medicine is widely practiced throughout the nation, especially in isolated and tribal areas where access to alternative therapies is limited. It is crucial to the delivery of healthcare to a significant portion of India's population while lacking the complex organizational structure of its contemporary equivalent. Shatdhautaghrita is an ancient Ayurvedic preparation made from clarified butter fat (cow ghee) that has been rinsed 100 times in water. This procedure transforms ghee into a silky, cooling, nourishing, and soft unguent that can be used as a conventional skin cream for antioxidants, moisturizing, and wrinkle prevention. The aim of this review paper is to study formulation strategy to prepare and evaluate moisturizing cream using different herbal ingredients.

Keywords: Moisturizing cream, Shata Dhauta Ghrita, Ayurveda, Anti inflammatory

INTRODUCTION

Shatadhauta Ghrita is a special Ayurvedic formulation, according to the Charaka Samhita description of Dravya Karana, which is the manufacture of a substance with the aim of endowing it with certain features. Acharya Charaka lists eight variables that describe the characteristics of the substance in order to explain Ashta Ahara Vidhi Visheshayatana (eight specific laws pertaining to food intake): Rashi (quantity), Desha (environment), Kala (time), Samyoga (combination), Karana (processing), Upayogasamstha (way of consumption), Prakriti (inherent nature of a thing), and Upayoktr (one who consumes).[1] About Karana (processing) Charaka Acharya states the following Karana is a refinement of natural product through which transformation of natural or inherent attributes of substance is made. This transformation is brought through contact with water and fire, cleaning/washing, churning, place of storage, time, adding aromatic substances, impregnation, storing for a specific period and also due to the effect of the container where it is stored.[2] Commenting on the above Acharya Chakrapani adds: During creation of a substance, the mahabhutas (gross elements) forming it endow the substance with certain inherent attributes or properties. The properties are modified during processing with water etc. which transforms or superimposes other properties in the substance by subduing its basic or natural properties.[3] Method of preparation of Shatadhauta Ghrita and Sahasradhauta Ghrita implements one of these samskaras (processing method) that transform the properties of ghee when it is washed for hundred and thousand times respectively with normal water. In this paper, the authors have sought to explore Ayurvedic literature on the therapeutic applications of Shatadhauta Ghrita and Sahasradhauta Ghrita as described in classical texts. Additionally, they have compiled and reviewed all relevant studies conducted on these formulations. In pharmaceutics, the "samskara" technique is used to induce the therapeutic properties of drugs, hence increasing their potency and bioavailability. Samskaro is known as Gunantaradhanam Uchyate. When characteristics like Rasa, Guna, Virya, and Vipaka undergo "Gunantaradhaanam," or the transformation of Sthoola Guna (macro form) into Sukshma Guna (micro form), the Dravya (Substance) undergoes changes in both its chemical and physical properties. Shatadhoutaghrita, an Ayurvedic preparation, is often suggested to address skin problems. As the name implies, it is created by washing ghee in water 100 times. This process turns ghee into a cooling, nutritious, silky substance and soft ointment that can be used as a conventional moisturiser and anti-wrinkle skin cream. In order to prepare Shata-dhauta-Ghrita, the Ghrita is washed in water until it becomes warm. The warm water is then removed, fresh water is added, and the process is repeated one hundred times. One further reference to the preparation of Shata-dhouta-ghrita known body's outermost covering, it is constantly exposed to a variety of environmental stimuli.

This balance could be upset by both external and internal forces. The lipids on the skin's surface can also be removed by frequent use of cleansers, detergents, and topical irritants like alcohol and hot water. Numerous skin issues resulted from a breakdown of the skin barrier. The study assessed the physicochemical properties of the Ayurvedic preparation and looked into any changes that might have happened during washing. The goal of washing cow ghee with water 100 times is examined. Because it doesn't have the distinctive smell and granular, oily consistency of cow ghee, Shata dhauta-ghrita is a homogenous, smooth, non-oily product that is easier to administer and enhances patient compliance. Because shata dhauta-ghrita doesn't irritate skin like ghee does and has a neutral pH, it is considered healthy. Shata-dhauta-ghrita's smaller particle size makes the product non granular, non-sticky,

and homogenous, which makes it simple to apply to the skin and may even increase how quickly something absorbs through the skin. Washing produces a homogenous oil-in water emulsion that is more suitable for topical treatments due to its improved consistency and viscosity. In India, clarified butter is called as Ghrita. Ghrita is the primary type of cooking oil used in all regional cuisines of India. It is also used medicinally and is a component of several Hindu religious rituals. As a result, Ghrita has enjoyed a long history of being well valued for a variety of reasons. Thus, Ghrita has been so highly regarded for so long for so many things. When we say Ghrita, we mostly mean Goghrita (cow ghee).

EVALUATION PARAMETER:

1. **Refractive index:**

The driving knob was turned such that the boundary line made precise contact with the separate in the middle of the text after a drop of water was applied to the prism. Distilled water has a refractive index of 1.3325 at 25˚C. The inaccuracy of the instrument can be found by comparing the reading to 1.3325. The error is negative (-) and the repair is plus (+) if the reading is less than 1.3325. If the reading is greater, the error is plus (+) and the adjustment is minus (-). One drop of oil is used to calculate the refractive index. If necessary, the measured measurement should be adjusted to obtain the precise refractive index. At 28˚C, the test samples' refractive index was determined.

2. **Specific gravity:**

Acetone and then ether were used to shake a specific gravity bottle in order to clean it. The bottle's weight was recorded once it had dried. The sample solution was cooled to room temperature. The stopper is placed and any excess liquid is removed after the test liquid has been carefully put to the specific gravity container. examined the weight. replaced the sample solution with distilled water and repeated the process.

3. **Rancidity test:**

1 ml of melted fat, 1 ml of concentrated hydrogen chloride, and 1 ml of a 1% phloroglucinol solution in diethyl ether were thoroughly combined with the fat acid mixture. The fat is clearly oxidized if it is red; it is only somewhat oxidized if it is pink.

4**. Determination of Acid value:**

10 gm of the sample were put into a conical flask was added 50 ml of an acid-free alcohol ether mixture (25+25 ml) that had been titrated against a 0.1N potassium hydroxide solution after being neutralized with 1 ml of phenolphthalein solution. Ultimately, a light pink tint appeared and lasted for fifteen seconds. To obtain consistent results, the experiment was conducted twice.

5.**Determination of Saponification value:**

About 2g of the material was weighed in a 250 ml round-bottom flask that was tared. 25 ml of alcohol after adding a KOH solution, a reflux condenser was connected. After boiling in a water bath for an hour, the contents of the flask were repeatedly turned. An excess of alkali was titrated using 0.5N HCl after 1 ml of phenolphthalein solution was added and the flask was allowed to cool. It indicated the quantity (ml) needed. The second experiment used the same reagent amounts and procedures but did not use the medicine. The required milliliters (b) were noted. To obtain congruent values, the experiment was repeated.

SHATADHATU-GHRITA

Ghrita Shatdhauta By creating therapeutic qualities, a pharmaceutical method known as "samskara" boosts the drug effectiveness and bioavailability. Samskara is known as GunantaradhanamUchyate. Qualities like Rasa, Guna, Virya, and Vipaka change in both their chemical and physical forms during the process of "Gunantaradhaanam," which is the conversion of Sthoola Guna (macro form) into Sukshma Guna (micro form) (Substance). ShatadhoutaGhrita is an Ayurvedic remedy that is frequently used to heal skin issues. As the name suggests, it is made by repeatedly washing ghee in water. This process turns ghee into a soft, cooling, nourishing, and silky ointment that can be used as a traditional moisturizer and anti-wrinkle skin cream. Making Shatadhauta Ghrita involves rinsing the Ghrita with water until the adding new water and discarding the heated water after a hundred iterations of the process until the water is warm. Another mention of the process of making ShatadhoutaGhrita by Santapya (heating) and Nirvapana (pouring) in Sita Jala (cold water) 100 times can be found in Vaidayak Shabda Sindukara. Shat dhautghrita, or "100 times washed ghee," is a traditional Ayurvedic preparation made of clarified butter fat, also referred to as cow ghee. Using this procedure, ghee becomes a silky, nourishing, cooling, and soft unguent that can be used as a face cream or as a typical moisturizing agent. Because ghee penetrates and feeds all seven layers of tissue, handcrafted shat dhautaghrita is a good emollient

for injured skin. A specific but very simple ghee preparation is utilized in numerous skin diseases, such as burns, wound scars, skin marks, burning feeling, and herpes.

Shata Dhauta Ghrita's advantages when it comes to healing skin damage brought on by pollution and sun exposure, Shata Dhauta Ghrita is incredibly effective. Ayurvedic herbs such as Avabhasini, Lohita, Shweta, Tamra, Vedini, Rohini, Mamsadhera, and others are combined with this silky cream to create an earthy scent that naturally nourishes and repairs your skin and hair. Real and Unadulterated Aroma There may occasionally be a slight, insignificant ghee smell to Shata Dhauta Ghrita, but it quickly goes away after application. All of these components come from organic sources and are 100% natural. The authentic and raw fragrance of the SDG is the hallmark of its purity. The earthy and natural smell that emanates from SDG is really enjoyable. The shelf-life is usually 18 months after which the goodness of oils in it may begin to evaporate. It shall be stored away from moisture and keep refrigerated for longer shelf-life. [17-18]

Advantages

1. Authentic and Organic Ingredients

2. Purely Vegetarian

3. Alcohol Free

4. Chemical Free

5. Completely Natural

6. Cruelty Free

7. Free from Preservatives

8. Traditionally Accepted

9. Known for Purity

10. Applicable to Modern Cosmetic World

Mode of Administration

Classical Ayurveda Texts mainly mention external application of Shatadhauta Ghrita. Recent author, Pandit Taranath, have suggested that Shatadhauta Ghrita can also be used internally, with a recommended dosage of 1/4 teaspoon.[10]

Method of preparation of Shatadhauta Ghrita: -

The whole procedure was divided in two methods.

Method A - Preparation of Shatadhauta Ghrita by Sagni method

Method B – Preparation of Shatadhauta Ghrita by Niragni method

Method A

To make Mandagni, the desired quantity of Ghrita (50 g) was placed in a steel vessel and heated on a gas stove from a distance of 4 cm. After the ghrita melted and began to boil, it was added to cold water that was 22 degrees Celsius. Ghrita formed a coating over the water once it cooled. Ghrita was collected using a spoon or spatula after self-cooling. The spoon arrived with a watery section.

Once more, the same Ghrita was exposed to light heat (Mamdani) until the water began to splash. Once more, it was submerged in 22 °C cold water. This procedure was carried out twelve times.

Method B

A steel vessel was filled with the desired quantity of Ghrita (50g). The Ghrita was completely submerged in water after the desired volume of cold water (100 ml) was added. The Ghrita with water's temperature was recorded. It was thoroughly rubbed with a steel glass under some pressure until the water's temperature increased. Water was removed and monitored after the temperature was raised. Fresh water was added once again, and the procedure was carried out ten times. For the preparation of Shatadhauta Ghrita, both approaches are simple. However, from a pharmaceutical perspective.

CONCLUSION

Shatadhauta Ghrita is a commonly used topical treatment for skin conditions, including burns. This Ayurvedic formulation can be prepared in two ways: first, by heating the ghrita and adding chilled water; second, by separating it from the cold water and heating it once more before adding water. The second method involves adding water to Ghrita, rubbing it under pressure for a while, then changing the water and adding it again. Both procedures are carried out a hundred times. This is an example of an emulsion in which Ghrita and water are immiscible. Oil-water (o/w) emulsions are often used for general remedial purposes and as water-launderable drug bases.Water-oil (w/o) emulsions are utilized all the more generally for the treatment of dry skin and emollient applications. Thus, from this review, it can be concluded that the shata Dhruti ghrita finds its modern applications in Wound Healing, anti-inflammatory activities of active pharmaceutical ingredients in form of various nano formulations. More research endeavours are required to determine the various pharmacological as well as pharmaceutical applications of Shata Dhruta Ghrita in modern pharmaceutical era.

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The authors have no conflicts of interest to declare.