

Shatdhaut Ghrita An Ayurvedic Technique Used to Prevent Inflammation

Rutika More¹, Sonali Tambe², Rajeshree Muke³, Pooja pagare⁴

Dr. Rupali R. Tasgaonkar⁵

¹Student, Yadavrao Tasgaonkar Institute of Pharmacy Bhivpuri Road Karjat, India.

²Assistant Professor, Yadavrao Tasgaonkar Institute of Pharmacy Bhivpuri Road Karjat, India.

^{3,4}Student, Yadavrao Tasgaonkar Institute of Pharmacy Bhivpuri Road Karjat, India.

⁵Principal & Professor, Yadavrao Tasgaonkar Institute of Pharmacy Bhivpuri Road Karjat, India.

Abstract—Shatdhaut Ghrita is a classical Ayurvedic formulation prepared by repeatedly washing purified cow ghee one hundred times with water, a process that profoundly alters its physicochemical and therapeutic properties. This traditional technique transforms oily ghee into a soft, cooling, and easily absorbable emulsion, making it especially valuable for topical application. The present review explores the historical background, classical references, methods of preparation, physicochemical characteristics, pharmacological actions, and therapeutic applications of Shatdhaut Ghrita, with particular emphasis on its anti-inflammatory potential. Classical Ayurvedic texts describe its ability to pacify Pitta dosha, relieve burning sensations, and promote wound healing, while modern studies support these claims by demonstrating its anti-inflammatory, antioxidant, moisturizing, and tissue-regenerative effects. Repeated washing reduces free fatty acids, enhances water content, improves skin penetration, and provides a soothing effect on inflamed tissues. Recent advancements such as nanoemulsion formulations, herbal enrichment, and transdermal delivery systems have further expanded its scope in pharmaceutical and cosmetic applications. Despite its proven traditional use and emerging scientific validation, challenges related to standardization, shelf life, and limited clinical trials remain. Overall, Shatdhaut Ghrita represents a remarkable convergence of ancient Ayurvedic wisdom and modern dermatological science, offering a safe, natural, and cost-effective approach for the prevention and management of inflammation and various skin disorders.

Index Terms—Shatdhaut Ghrita, Ayurvedic formulation, Anti-inflammatory activity, Topical drug

delivery, Physicochemical properties, Wound healing, Skin disorders, Nano emulsion.

I. INTRODUCTION

Shatdhaut Ghrita is one of the most unique and ancient Ayurvedic formulations described in classical texts. The term “Shatdhaut” literally means “washed one hundred times,” and “Ghrita” refers to purified cow ghee. In this traditional process, pure cow ghee is repeatedly washed one hundred times with clean, cold water in a copper or earthen vessel. This continuous washing, known as Dhaut Sanskar, transforms the thick, oily ghee into a soft, creamy, and cool substance with enhanced therapeutic properties. The repetitive washing changes its physical and chemical characteristics, such as reducing fatty acids, increasing water content, and improving skin absorption.

Ayurveda considers Shatdhaut Ghrita as a highly effective topical preparation for various skin ailments. It is believed to balance Pitta dosha, which is primarily responsible for heat and inflammation in the body. When applied externally, it provides a cooling and soothing effect, helping to relieve burning sensations, redness, irritation, and inflammatory skin disorders. Because of its excellent moisturizing nature, it nourishes the deeper layers of the skin and promotes tissue regeneration.

Modern research supports these traditional claims. Studies have reported that Shatdhaut Ghrita exhibits anti-inflammatory, antioxidant, and wound-healing properties. The microscopic particle size and emulsified structure of the washed ghee allow it to

penetrate deeply into the skin's seven layers, where it can act on inflamed tissues and promote healing. Additionally, its lipid and water composition forms a natural protective barrier that prevents dryness and enhances skin elasticity. Researchers are also exploring its use as a natural base for herbal creams, ointments, and cosmetic formulations due to its biocompatibility and stability.

Thus, Shatdhaut Ghrita represents an important bridge between traditional Ayurvedic wisdom and modern dermatological science. It offers a natural, safe, and cost-effective approach for the prevention and management of inflammation and various skin conditions. With growing interest in herbal and holistic therapies, this ancient preparation continues to hold significant potential for future medical and cosmetic applications.

II. HISTORICAL BACKGROUND AND CLASSICAL REFERENCES OF SHATADHAUTA GHRITA

Historical Background

The origin of Shatadhauta Ghrita (SDG) dates back to ancient Ayurvedic texts, where ghee (Ghrita) was considered one of the most sacred and therapeutically versatile substances. In Ayurveda, Ghrita is regarded as the best Sneha Dravya (oleaginous substance) due to its ability to penetrate deep into body tissues (Sukshma, Vyavayi, and Yogavahi properties).

The process of washing ghee multiple times to enhance its cooling and soothing properties was developed as a specialized pharmaceutical technique known as "Dhaavana Samskara" — a type of Shodhana (purification) method described in classical Rasa Shastra and Bhaishajya Kalpana texts. Over centuries, this method evolved into the specific process of "Shatadhauta Ghrita" — ghee washed a hundred times with water.

This preparation was primarily used externally for burns, wounds, ulcers, and skin inflammation, and was mentioned as a cooling and rejuvenating remedy in both Samhita (classical compendia) and Rasa Granthas (alchemical treatises).

Classical References

1. Charaka Samhita (Sutra Sthana & Chikitsa Sthana):

Ghrita is described as the best Sneha for internal and external use.

It possesses Vata-Pitta shamaka, Ropana (healing), and Varnya (improving complexion) properties.

Although Shatadhauta (hundred times washed) Ghrita is not explicitly named, the technique of Dhaavana (repeated washing with water) to enhance Sheeta (cooling) and Mridu (soft) qualities is described.

2. Sushruta Samhita (Chikitsa Sthana, 31/10-11):

Mentions the use of Ghrita for Vrana (wounds), Daha (burns), and Twak Vikara (skin diseases).

It emphasizes that properly prepared ghee soothes burning sensations and promotes healing — forming the conceptual foundation for Shatadhauta Ghrita.

3. Ashtanga Hridaya (Uttara Tantra):

Describes Ghrita as "Pitta Shamana" (alleviator of Pitta dosha) and useful in skin ailments (Kushta, Visarpa).

Recommends washing or processing ghee for specific conditions to modify its Guna (qualities), aligning with the later SDG technique.

4. Rasatarangini (Taranga 6, Sloka 156–160):

Provides a detailed description of Shatadhauta Ghrita preparation — "Ghritam Shatadhautam Toyena" — emphasizing that washing ghee 100 times in a copper vessel produces a cooling, smooth, white, and easily absorbable cream, beneficial for burns, wounds, and inflammatory skin conditions.

5. Ayurvedic Formulary of India (AFI, Part 1):

Lists Shatadhauta Ghrita as a classical Ayurvedic preparation used externally for burns, wounds, and skin inflammation, confirming its continuing acceptance in modern Ayurvedic pharmacopeia.

III. METHOD OF PREPARATION

Shatdhaut Ghrita is prepared by a refined process involving washing clarified cow ghee

(ghrita) one hundred times with clean water.

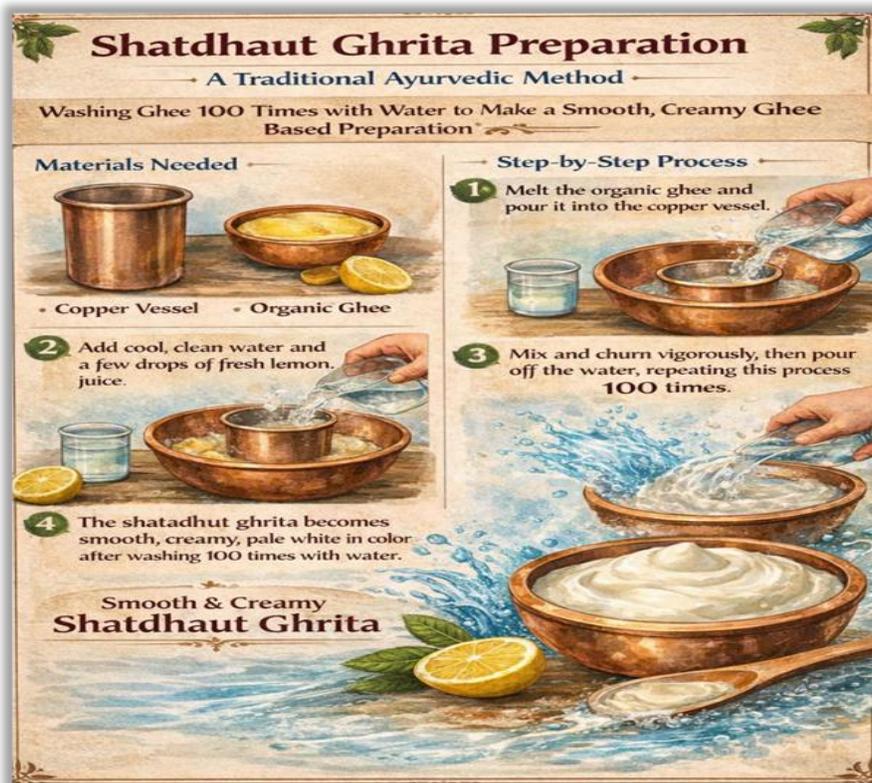


Fig No.1-Shatdhaut Ghrita Preparation

Recent studies describe two major methods for this process: Sagni (with heat) and Niragni (without heat).

➤ Sagni Method (With Heat)-

1. The ghee is mildly heated in a suitable vessel (often copper or other traditional metal) to a moderate temperature.
2. While warm, cold water is poured over the ghee. The mixture is stirred or rubbed to allow the water and ghee phases to interact.
3. The water is drained or discarded after each wash, and fresh cold water is added. This washing (or “dhauta”) and stirring/rubbing cycle is repeated 100 times.
4. Over the cycles, physical changes such as color lightening toward white or creamy shade, smoother texture, and increase in pliability are noted. Sagni method often gives a more aesthetically pleasing, whiter product but takes more time and energy.

➤ Niragni Method (Without Heat)-

1. In this method, the ghee is not heated; the process relies purely on mechanical rubbing/churning with water.
2. Ghee and water are mixed, and then rubbed together (for example with a spatula or in a bowl) until the water is absorbed, then fresh water is added. This cycle is repeated 100 times.
3. This method tends to produce a higher yield and takes less preparation time compared to the Sagni method. The texture may be creamier; color changes are present but often less dramatic.

Practical Considerations -

Vessel material: Traditional texts and recent researchers recommend using copper or similar metal vessels. They believe that vessel material can affect the properties of final product.

Water quality: Clean, preferably potable or distilled water is used for washing. Water temperature is cold or moderate, especially in Niragni.

Rubbing / stirring technique: The intensity or pressure during rubbing can influence emulsification and smoothness. Consistent rubbing is key.

Number of washes: Exactly one hundred wash cycles (“dham 100”) is the classical rule. All modern studies stick to 100 for consistency.

IV. PHYSICOCHEMICAL PROPERTIES OF SHATDHAU GHRITA

1. Texture Modification:

- After 100 washings, the thick cow ghee becomes soft, smooth, and creamy.
- This improved texture facilitates easy topical application and uniform skin coverage.

2. Color Change:

- The yellow ghee gradually turns pale white or cream.
- This indicates the removal of impurities and successful completion of the washing process.

3. Emulsion Formation:

- Water and fat combine to form a stable emulsion.
- The emulsion structure enhances penetration through the skin layers, improving therapeutic effectiveness.

4. PH Alteration:

- The processed ghee becomes slightly alkaline.
- A mildly alkaline environment helps neutralize acidic irritants and reduces skin inflammation.

5. Reduction of Free Fatty Acids:

- Washing decreases free fatty acid content.
- This reduces potential skin irritation and enhances biocompatibility.

6. Enhanced Cooling Property:

- Repeated washing increases the Sheeta (cooling) potency of ghee.
- Provides relief from burning, redness, and inflammatory responses.

7. Moisture Retention:

- The emulsion retains water, increasing the moisture content.
- Maintains skin hydration and prevents dryness-induced inflammation.

8. Reduced Viscosity:

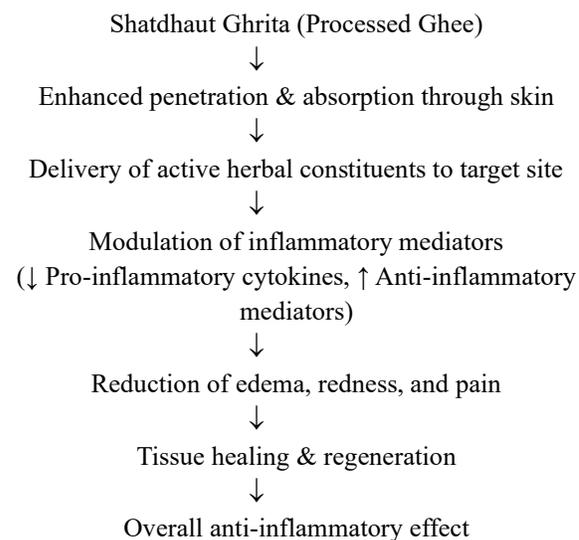
- The ghee becomes less thick and more spreadable.
- Promotes better absorption and uniform application on affected areas.

9. Therapeutic Implication:

- Combined physicochemical changes contribute to anti-inflammatory, soothing, and healing properties.
- These properties make Shatdhaut Ghrita an effective natural remedy for topical inflammatory conditions.

V. PHARMACOLOGICAL ACTION

Anti-Inflammatory Action of Shatdhaut Ghrita – Shatdhaut Ghrita (SDG) is a traditional Ayurvedic preparation made by washing cow ghee 100 times with water. One of its most important pharmacological effects is its anti-inflammatory property, which helps prevent or reduce inflammation in the skin and underlying tissues.



1. Cooling (Sheeta) Effect:

- Repeated washing reduces the heat (Ushna) quality of ghee, enhancing its Sheeta (cooling) potency.
- This cooling effect directly reduces redness, burning, and swelling associated with inflammatory reactions.
- In Ayurveda, excess Pitta dosha causes inflammation, and SDG balances Pitta, calming inflamed tissues.

2. Reduction of Inflammatory Mediators:

- Modern studies suggest that SDG can suppress the production of pro-inflammatory cytokines such as TNF- α and interleukins, as well as prostaglandins.

- These mediators are responsible for tissue swelling, pain, and erythema; reducing them alleviates inflammation.
3. Skin Barrier Protection:
- SDG forms a thin emollient layer on the skin that protects it from environmental irritants and microbial invasion.
 - By preventing further irritation, it indirectly reduces ongoing inflammatory responses.
4. Antioxidant Action:
- Cow ghee naturally contains antioxidants that neutralize free radicals, which are triggers for oxidative stress-related inflammation.
 - Reducing oxidative stress helps lower tissue damage and inflammatory progression.
5. Moisturizing and Tissue Healing:
- The emulsion formed during the washing process increases water retention in the skin, keeping tissues hydrated.
 - Proper hydration reduces dryness-induced inflammation and promotes faster healing of inflamed areas.
6. Topical Penetration:
- The fine particle size of SDG allows deep penetration into the skin layers; ensuring that its anti-inflammatory and soothing effects reach the site of inflammation effectively.

VI. ADVANCED TECHNIQUES IN SHATDHOUT GHRITA PREPARATION AND APPLICATION

1. Microemulsion and Nanoemulsion Formulation
- Modern research is exploring the preparation of Shatdhaut Ghrita as Microemulsion or Nanoemulsion, which are tiny droplets of ghee mixed with water and herbal extracts. This increases skin penetration and enhances the bioavailability of active compounds, making it more effective for anti-inflammatory and healing purposes.
2. Herbal Enrichment Techniques
- Advanced methods now incorporate specific herbal extracts with targeted pharmacological actions into Shatdhaut Ghrita. For example, adding turmeric or aloe vera extracts enhances antioxidant and anti-inflammatory properties, improving skin repair and reducing oxidative stress.

3. Standardization and Quality Control
- Modern studies focus on standardizing the preparation process, like controlling temperature, number of washes, and proportion of ingredients. This ensures consistent therapeutic effects and safety for clinical applications.
4. Transdermal Delivery Systems
- Researchers are experimenting with Shatdhaut Ghrita-based gels, creams, or patches for controlled transdermal delivery. This approach allows sustained release of active compounds over time, improving anti-inflammatory efficacy and patient compliance.
5. Combination with Modern Polymers
- Advanced formulations sometimes combine Shatdhaut Ghrita with biodegradable polymers to create a slow-release, bioadhesive preparation. This helps in treating chronic inflammation and wounds, offering better stability and shelf-life.

VII. THERAPEUTIC APPLICATIONS

1. Anti-Inflammatory Agent
- Shatdhaut Ghrita is widely used to reduce inflammation, swelling, and redness in skin disorders. Its application helps calm irritated skin and soothes conditions like rashes, eczema, and minor burns.
2. Wound Healing and Tissue Repair
- The preparation promotes regeneration of skin cells and accelerates healing of minor cuts, abrasions, and superficial burns. Its nourishing property supports faster recovery of damaged tissues.
3. Moisturizer and Skin Softener
- Being a finely processed ghee, it deeply moisturizes the skin, improving texture and softness. It is particularly useful in dry, rough, or cracked skin conditions.
4. Treatment of Stretch Marks and Scars
- Regular application can reduce stretch marks and scar formation by improving skin elasticity and promoting gradual repair of the dermal layers.
5. Anti-Aging Effects
- Rich in antioxidants, Shatdhaut Ghrita helps neutralize free radicals, reducing oxidative stress and delaying skin aging. It nourishes the skin and maintains healthy skin tone.
6. Soothing Burns and Sun Damage
- Its cooling and anti-inflammatory properties make it ideal for mild burns, sunburns, or heat-induced skin irritation, providing relief and supporting healing.

7. Enhancement of Herbal Medicine Absorption

When combined with medicinal herbs, Shatdhaut Ghrita enhances the absorption of active ingredients through the skin, improving the efficacy of topical herbal treatments.

VIII. ADVANTAGES OF SHATDHAUT GHRITA

1. Enhanced Skin Absorption

The repeated washing process makes ghee soft and fine, allowing better penetration of active herbal compounds into the skin.

2. Natural and Safe

Being made from ghee and herbal ingredients, it is non-toxic and generally safe for most skin types.

3. Multi-Purpose Therapeutic Effects

It has anti-inflammatory, wound healing, moisturizing, and anti-aging properties, making it a versatile topical treatment.

4. Improved Bioavailability of Herbs

Shatdhaut Ghrita acts as an excellent carrier for medicinal herbs, enhancing their efficacy when applied topically.

5. Cost-Effective and Easily Available Ingredients like ghee and water are readily available and inexpensive, making it accessible for traditional and modern therapeutic use.

IX. LIMITATIONS OF SHATDHAUT GHRITA

1. Time-Consuming Preparation

The traditional process of washing ghee 100 times is labor-intensive and time-consuming.

2. Short Shelf-Life

Due to its natural composition, it may spoil or oxidize quickly if not stored properly.

3. Limited Clinical Studies

Although widely used in Ayurveda, there are few modern clinical trials, so scientific validation of all claimed effects is limited.

4. Potential for Contamination

If hygiene is not maintained during preparation, there is a risk of microbial contamination.

5. Unsuitable for Certain Skin Types

In some cases, individuals with extremely oily skin may find it too greasy or heavy for topical use.

X. CONCLUSION

Shatadhauta Ghrita is a unique and valuable Ayurvedic formulation known for its excellent cooling, soothing, and skin-healing properties. The traditional process of washing ghee one hundred times transforms it into a light, smooth, and easily absorbable emulsion. This modification enhances its moisturizing ability and reduces irritation, making it highly effective in calming inflammation, nourishing the skin, and supporting natural tissue repair. Its rich content of natural lipids and fat-soluble vitamins further helps protect the skin from damage and dryness.

Scientific studies support its anti-inflammatory, antioxidant, antimicrobial, and wound-healing actions, which make it useful in managing conditions such as burns, eczema, dermatitis, acne, and chronic wounds. Additionally, modern advancements like nanoemulsion and transdermal delivery systems have increased its therapeutic potential and relevance in pharmaceutical and cosmetic applications. With proper standardization and clinical validation, Shatadhauta Ghrita holds strong promise as a natural, safe, and effective bridge between traditional Ayurvedic medicine and modern scientific healthcare.

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