

PREPARATION OF *DARUHARIDRA* TAILA AND ITS CONVERSION INTO *DARUHARIDRA* CREAM WITH SPECIAL REFERENCE TO KIKKWIS

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ABSTRACT

Daruharidra (*Berberis aristata*) has been extensively documented in Ayurvedic classics for its antimicrobial, anti-inflammatory, and wound-healing properties. Traditional formulations employ *Daruharidra* in *Taila Pāka* (oil-based preparations), which, though therapeutically effective, often face limitations in patient acceptability and stability. The present study focuses on the preparation of *Daruharidra Taila* using classical *Sneha Pāka* methodology and its subsequent conversion into a modern cream dosage form. Analytical evaluation was carried out to establish pharmaceutico-analytical standards for both oil and cream, with special reference to *garbhini kikkwis* (pregnancy-associated dermal conditions). The *Daruharidra* cream demonstrated smooth consistency, spreadability, and stability, thereby offering improved patient compliance while retaining the therapeutic integrity of the classical oil. This work highlights the potential

of integrating traditional Ayurvedic pharmaceuticals with modern formulation science to enhance clinical applicability.

INTRODUCTION

Pregnancy brings significant physiological changes, and one of the most common dermatological concerns is *striae gravidarum*^[1] (stretch marks), affecting up to 90% of women in the third trimester. Ayurveda describes this condition as *Garbhini Kikkwis*, marked by reddish or blackish streaks, itching, burning, and discoloration due to vitiation of *Vata* and *Kapha*. Classical texts recommend *Taila Abhyanga*^{[2],[3]} (oil massage) as a preventive and therapeutic measure, aiming to maintain skin elasticity, nourish tissues, and pacify doshas. Modern dermatology supports this approach, noting that emollient and antioxidant-rich oils improve hydration and dermal resilience. Shown benefits in reducing itching and discoloration, while herbal creams, ointments^[4] offer better spreadability and cosmetic acceptability.

Daruharidra tail^[5] (*Berberis aristata*), a well-known Ayurvedic drug, is revered for its efficacy in managing skin disorders, inflammatory conditions, and microbial infections. Classical texts such as Śārṅgadhara Saṃhitā^[6] and Aṣṭāṅga Hṛidaya^[7] describe its incorporation into *Taila Pāka* preparations, which serve as potent topical remedies. However, conventional oil-based formulations often present challenges in terms of greasiness, rancidity, and limited patient acceptability, particularly in sensitive conditions such as *garbhini kikkwis*.^{[8][9]}

Modern pharmaceuticals emphasizes the need for dosage forms that combine therapeutic efficacy with enhanced stability and user-friendliness. Cream formulations, being semi-solid emulsions, offer advantages of spreadability, controlled absorption, and improved shelf life. The present study aims to bridge classical Ayurvedic wisdom with contemporary pharmaceutical technology by preparing *Daruharidra Taila* through traditional *Sneha Pāka Vidhi*^[10] and converting it into a stable cream formulation. Analytical evaluation of both dosage forms was undertaken to establish standard manufacturing processes and quality parameters, thereby ensuring evidence-based validation of this classical drug in a modern context.

MATERIAL AND METHODS

Procurement of Raw material.

All the raw materials were procured from authenticated source-Dhanvanatari Ayurvedic Bhanadar, Kharghar, Navi Mumbai.

Sanskrit Name	Latin/Botanical Name	Family
<i>Daruharidra</i>	<i>Berberis aristate</i>	<i>Berberidaceae</i>
<i>Tila Tail</i>	<i>Sesamum indicum</i>	<i>Pedaliaceae</i>

Preparation of *Daruharidra taila*

Methodology

Ingredients	Quantity
<i>Daruharidra Powder</i>	50gm
<i>Murchhit tail</i>	200ml
Distilled Water	800ml

Preparation of *Daruharidra Oil*^[11]

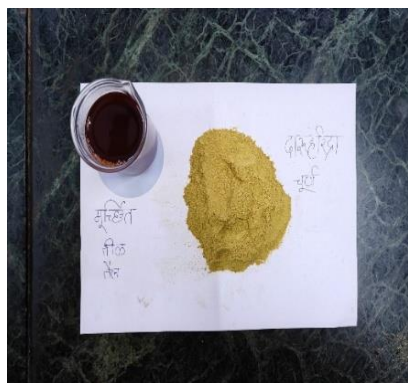
- Daruharidra* oil was prepared according to the *Snehapāka (Taila Pāka Vidhi)* described in the *Śārṅgadhara Saṃhitā, Madhyama Khanda*.
- A *kalka* was prepared using the leaves of *Daruharidra*.
- One part of *Daruharidra* leaves, four parts of *Murchhita* oil (*Tila Taila*), and sixteen parts of water were combined.
- The mixture was heated gently over a mild flame until the characteristic signs of *Taila Siddhi* appeared.
- Sneha Siddhi Parīkṣā*^[10] was performed to confirm the absence of residual water and the suitability of the oil for use.
- The classical tests applied were:
 - Phen Parīkṣā**: appearance of foam on the surface of the oil.
 - Varti Parīkṣā**: formation of a wick when the *kalka* is rubbed between the fingers.
 - Śabda Parīkṣā**: a drop of oil burns on flame without producing any crackling sound.
- Finally, the prepared oil was filtered through clean muslin cloth and stored in an airtight glass container.

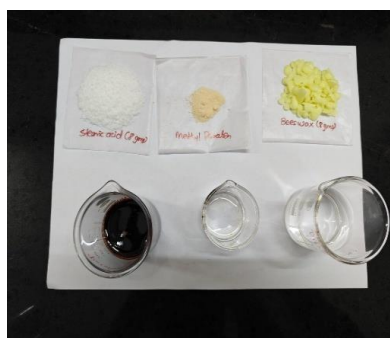
Preparation of *Daruharidra cream*

Ingredients	Quantity
1. <i>Daruharidra taila</i>	30ml
2. Bees wax	8gm
3. Stearic acid	8gm
4. Glycerine	10ml
5. Methyl Parabene	500mg

Methodology (Formulation Process)

1. Beeswax^{[12],[13]}, stearic acid^{[14][15]}, and water were heated together in a separate container at a controlled temperature of 85–90 °C.
2. Preservatives Methyl parabene^{[16][17]} were dissolved in water prior to the heating of the mixture.
3. The above preparation was designated as Mixture A.
4. Separately, *Daruharidra* oil was incorporated into glycerine^{[18] [19]} to obtain Mixture B.
5. Mixture B was subsequently added to Mixture A, and the combined preparation was mixed thoroughly.
6. Final homogenization was carried out after Mixture A had cooled to room temperature, ensuring uniform dispersion of all components.

Preparation of *Daruharidra* Taila**Raw Material****Preparation of Kalka (1)****Preparation of Kalka (2)****Addition of Kalka in Oil****Addition of Water****Heating of Mixture**

**Final Product****Shabda Pariksha****Phen Pariksha****Varti Pariksha****Snehapaka Pariksha****Preparation of Daruharidra Cream****Raw Material****In -Process cream preparation****Final Daruharidra cream****RESULTS**

A smooth, semi-solid, easily spreadable oil-in-water *Daruharidra* cream was successfully prepared with appropriate colour and consistency.

Analytical Test of *Daruharidra* Cream

Organoleptic Evaluation: The organoleptic characters of the test sample were documented through systematic examination using the sense organs.

Determination of pH^[20]

Standard buffer solutions were prepared by dissolving one tablet each of pH 4 and 100 mL of distilled water. For pH determination, 1 g of the sample was weighed, and 100 mL of distilled water was added, i.e., 1% solution prepared. The mixture was stirred thoroughly and kept for 3 to 4 hrs and filtered, and the filtrate was used for analysis. The pH meter was switched on and allowed to warm for 30 minutes. Calibration was performed using the pH 4 solution, which was adjusted to 4.02 at room temperature (32.5 °C). The pH 7 solution was then introduced, and the meter was adjusted to 7.1 and the reading was verified without further adjustment. Finally, the sample solution was introduced, and the pH reading was recorded.

Spreadability Test

The Spreadability^[21] of the formulated gels was assessed by placing 0.5 g of gel on a pre-marked circle of 2 cm diameter on a glass plate. A second glass plate was placed over the sample, and a weight of 500 gm was allowed to rest on the upper plate for 5 minutes. The diameter of the circle after spreading was measured. The percent spread was calculated using the following equation:

$$R1=1\text{cm}$$

$$R2=1.6\text{cm.}$$

$$\% \text{ Spread by Area} = A2/A1 \times 100$$

(where $A1=3.14*(1)^2$ cm and $A2=$ final area after spreading.)

Calculation

$$=3.14*(1.6)^2/3.14*(1)^2*100$$

$$=2.56*100$$

$$=256\%$$

Tests	Results
Colour	Peach colour
Odour	Oil based
Texture	Smooth
pH	5.56
Spreadability	256%
Phase Separation	Not seen

Analytical Tests of Daruharidra Oil

Analytical Test	Results
Colour	Browinsh
Odour	Oil based
Loss on Drying	0.84%
Refractive Index	1.4702
Specific Gravity	0.9200
Viscosity	64.185cps
Density	0.9070 gm/cm ³

CONCLUSION

Daruharidra Taila was prepared by classical methods and effectively converted into a stable *Daruharidra* cream.

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