

Formulation of Shirbala Oil

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ABSTRACT

Shirbala oil commonly known as kshirabala taila is a classical Ayurvedic medicated oil prepared using Bala (sidacordifolia), cow's milk, and sesame oil.

It is one of the most important formulation used in Ayurvedic medicine for treating neurological disorder musculoskeletal disease, joint pain paralysis, insomnia and vata - related disorders.

The formulation is prepared through the traditional Sneha Kalpana process, which facilitates the transfer of active phytoconstituents into the oil medium. This project present the ingredients, formulation, preparation method, quality control parameters, the rapeutic uses, and pharmacological actions of Shirbala oil.

The formulation is prepared using Bala (Sidacordifolia), sesame oil (Til Taila), and cow's milk (Kshira) through the traditional Sneha Kalpana process. Bala is known for its strengthening, rejuvenating, anti-inflammatory, and nervine tonic properties, while sesame oil acts as an effective carrier of the active constituents. Cow's milk enhances the nourishing and restorative effects of the formulation.

The present project focuses on the formulation and preparation of Kshirabala Oil according to classical Ayurvedic principles. The prepared oil is evaluated based on its appearance, color, odor, and therapeutic significance. Kshirabala Oil is commonly used in Ayurvedic practice for the management of paralysis, arthritis, sciatica, muscle weakness, cervical spondylosis, insomnia, and other nervous system disorders. Due to its nourishing and strengthening properties, it helps improve muscle function, relieve pain and stiffness, and promote overall health and well-being.

This study highlights the importance of traditional Ayurvedic formulations and their role in providing safe, natural, and effective healthcare solutions.

KEYWORDS: *Kshirabala Taila, Bala, Sesame Oil, Cow's Milk, Sneha Kalpana, Ayurveda, Neurological Disorders, Musculoskeletal Disorders, Pain Relief, Rejuvenation, Therapeutic Uses, Quality Control, Paralysis, Arthritis*

INTRODUCTION

Kshirabala Oil (Shiribala Oil) is a renowned Ayurvedic medicated oil traditionally used for the management of neurological, musculoskeletal, and Vata –related disorders. It is prepared from Bala (Sida cordifolia), sesame oil (Til Taila), and cow's milk (Kshira) through a specialized Ayurvedic pharmaceutical process known as Sneha Kalpana. The formulation has been described in classical Ayurvedic texts and is valued for its nourishing, strengthening, rejuvenating, and therapeutic properties.

Shirabala Oil is an important Ayurvedic preparation described in traditional texts. The name "Kshirabala" is derived from "Kshira" (milk) and "Bala" (Sida cordifolia). It is mainly used externally for massage and internally under medical supervision. The oil helps strengthen muscles, nerves, and joints while balancing aggravated Vata dosha.

Kshirabala Oil is widely used in Ayurvedic therapies such as massage (Abhyanga) and is valued for its effectiveness in improving muscle and nerve function.



AIM

The aim of this project:

The formulate and prepare Kshirabala (Shiribala) Oil a traditional Ayurvedic medicated oil, using Bala (*Sida cordifolia*), sesame oil, and cow's milk according to classical Ayurvedic methods.

The formulation is intended to possess nourishing, strengthening, and rejuvenating properties that support the nervous and musculoskeletal systems.

This project also aims to study the ingredients, preparation method, therapeutic uses, and medicinal significance of Kshirabala Oil in the management of Vata disorders, joint pain, muscle weakness, and neurological conditions.

Furthermore, it seeks to understand the role of Ayurvedic formulations in promoting health and well-being through natural remedies.

OBJECTIVE

To formulate and prepare Kshirabala (Shiribala) Oil using traditional Ayurvedic methods.

1. To study the ingredients used in the formulation and their medicinal properties.
2. To understand the manufacturing process of Kshirabala Oil.
3. To evaluate the therapeutic uses of Kshirabala Oil in neurological and musculoskeletal disorders.
4. To assess the quality and characteristics of the prepared oil.
5. To explore the Ayurvedic significance of Kshirabala Oil in managing Vata – related disorders.
6. To promote the use of herbal and natural formulations for healthcare and wellness.
7. Isolate bioactive compounds from these plants using standardized extraction and purification techniques.
8. Characterize the isolated compounds through advanced analytical methods (UV-Vis, FTIR, NMR, MS) to determine their chemical structure, purity, and functional groups.
9. Evaluate biological activities of the compounds (e.g., antimicrobial, antioxidant, anticancer, antidiabetic) using in vitro and in vivo assays.
10. Establish correlations between traditional uses of the plants and the pharmacological activities of the isolated compounds.

11. Contribute to drug discovery pipelines by identifying potential lead molecules for pharmaceutical development.
12. Promote sustainable utilization of medicinal plants by highlighting their value in modern healthcare.

DRUG PROFILE

1. Bala [*Sida cordifolia* (Linn.)]

- **Drug Name:** Bala
- **Synonyms:** Aatibala, Vatyalika, Baladya
- **Biological Source:** Dried roots (and sometimes the whole plant) of *Sida cordifolia* (Linn).
- **Chemical Constituents:** Alkaloids (ephedrine, pseudoephedrine), flavonoids, phytosterols, mucilage, tannins, saponins.
- **Uses:** Tonic, anti-inflammatory, analgesic, nervine tonic, strengthens muscles, useful in paralysis, arthritis, sciatica, and Vata disorders.



2. Cow's Milk (Ksheera)

- **Drug Name:** Cow Milk
- **Synonyms:** Go Dugdha, Ksheera
- **Biological Source:** Fresh milk obtained from healthy cows (*Bos indicus* or *Bos taurus*)
- **Chemical Constituent:** Water (~87%), proteins (casein, lactalbumin), fats, lactose, minerals (calcium, phosphorus, potassium), vitamins (A, D, B-complex)
- **Uses:** Nutritive, rejuvenative (Rasayana), tonic, promotes strength and immunity, used as an anupana (vehicle) in Ayurvedic formulations, pacifies Vata and Pitta, supports tissue nourishment.



3. Sesame Oil (TilaTaila)

- **Drug Name:** Tila Taila (Sesame Oil)
- **Synonyms:** Sesame Oil, Gingelly Oil
- **Biological Source:** Seeds of *Sesamum indicum*
- **Chemical Constituents:** Oleic acid, linoleic acid, sesamin, sesamolin, vitamin E
- **Uses:** Base oil in Ayurvedic formulations, nourishes skin, relieves pain, strengthens muscles and joints.



INGREDIENTS

Sr.No.	Ingredients	Quantity
1.	Balarootpaste(kalka)	100g
2.	Sesameoil	400ml
3.	Baladecoction	16parts
4.	Cowsmilk	1600ml

Function of Ingredients:

1. **Bala:** Strengthens nerves and muscles; acts as the main therapeutic herb. Sesame Oil – Serves as the base oil and carrier of active constituents.
2. **Cow's Milk:** Provides nourishing and rejuvenating properties.
3. **Water:** Used for preparing the Bala decoction (Kwatha).



PROCESS OF MAKING

Equipment Required:-

- Stainless Steel Vessel
- Measuring cylinder
- Stirring rod / spoon
- Gas stove or hot plate
- Cotton cloth or filter
- Glass storage bottle

Procedure:-

Step 1: Cleaning and Preparation of Raw Materials

- Collect good – quality bala root powder.
- Remove any foreign matter such as dust, stones, or impurities.
- Measure all ingredients accurately.
- Ensure all utensils are clean and dry.

Step 2: Preparation of Bala Decoction (Kwatha)

- Take 25g of Bala root powder in a stainless steel vessel.
- Add 400mL of water.
- Heat the mixture on a low flame.
- Stir occasionally during boiling.
- Continue boiling until the volume is reduced to approximately 100 mL (one-fourth of the original volume).
- Remove from heat and allow it to cool slightly.
- Filter through a clean cotton cloth.
- Collect the clear Bala decoction and keep aside.

Step 3: Preparation of Bala Paste (Kalka)

- Take about 5–10g of Bala powder.
- Add a small quantity of water.
- Triturate thoroughly to obtain a smooth paste.
- Keep the paste ready for further processing.

Step 4: Preparation of Oil Mixture

- Take 100mL sesame oil in a clean vessel.
- Add the prepared Bala paste.
- Add 100mL Bala decoction.
- Add 100mL fresh cow's milk.
- Mix all ingredients thoroughly to obtain a uniform mixture.

Step 5: Sneha Paka (Oil Cooking Process)

- Place the vessel on a low flame.
- Heat the mixture gently.
- Stir continuously to prevent the paste from settling at the bottom.
- During heating, water from the decoction and milk gradually evaporates.
- Continue heating until the mixture becomes thick and only oil remains.
- Observe the classical signs of completion (Taila Siddhi Lakshana): Frothing subsides. Crackling sound disappears. Moisture is absent. Kalka becomes soft and non-sticky. Characteristic aroma of medicated oil develops.

- Remove the vessel from heat immediately after reaching the desired stage.

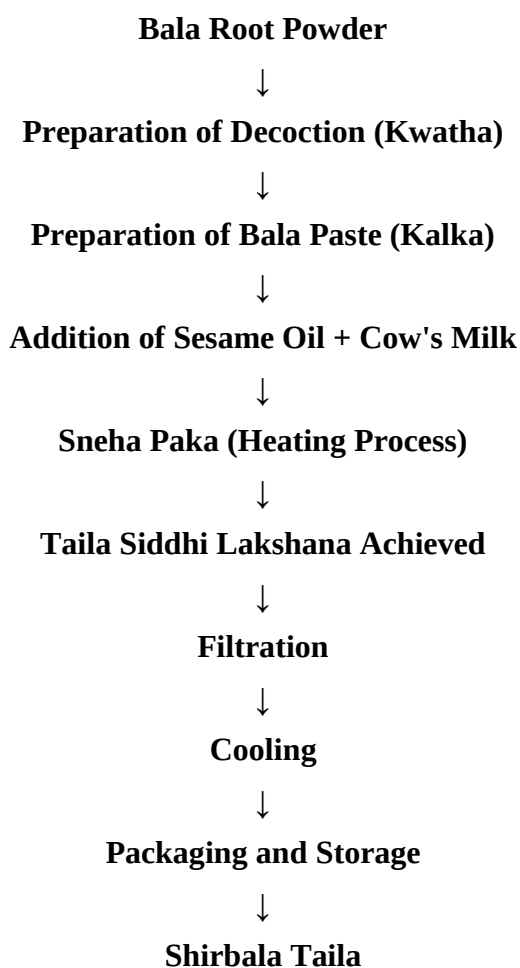
Step 6: Filtration

- Allow the oil to cool slightly while still warm.
- Filter through a clean cotton cloth.
- Separate the oil from the residue (Kalka).
- Collect the filtered oil in a clean container.

Step 7: Cooling and Storage

- Allow the filtered oil to cool completely.
- Transfer to a dry amber-colored glass bottle.
- Close the bottle tightly.
- Store in a cool, dry place away from direct sunlight.

Flow Chart:-





ADVANTAGES & DISADVANTAGES

Advantages		Disadvantages	
1.	Strengthens Muscles and Body Tissues Bala is known as a Balya (strength-promoting) herb in Ayurveda. Regular massage with Shirbala Oil helps nourish muscles and improves muscle tone. It is beneficial for individuals experiencing physical weakness, fatigue, or muscle wasting.	1.	May Cause Allergic Reactions Some individuals may be sensitive to herbal ingredients or sesame oil used in the formulation. Symptoms may include: • Skin redness Itching • Rashes • Irritation
2.	Improves Nervous System Function Shirbala Oil is considered a nerve tonic. It helps nourish nerves and may support recovery from neurological conditions. Traditionally used in paralysis, facial palsy, sciatica, and nerve weakness.	2.	Oily and Greasy Nature The oil can leave a greasy layer on the skin and clothing. It may be inconvenient for people who prefer non-oily topical preparations.

3.	Reduces Joint Pain and Stiffness The oil possesses anti –inflammatory properties. Helps reduce pain, stiffness, and discomfort associated with joint disorders. Beneficial in conditions such as osteoarthritis and age-related joint degeneration.	3.	Not Suitable for Certain Skin Conditions Application on infected wounds, fungal infections, or severely inflamed skin may worsen discomfort. Medical advice should be sought before use on damaged skin.
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USES

- External massage (Abhyanga)
- Muscle weakness
- Joint pain and stiffness
- Vata disorders
- General body strengthening and nourishment

RESULT

The formulated Shirbala Oil was successfully prepared using the prescribed Ayurvedic method. The final formulation exhibited desirable physicochemical and organoleptic characteristics. The oil appeared as a clear to slightly yellowish-brown liquid with a characteristic herbal odor and smooth consistency. No phase separation, sedimentation, or rancidity was observed during the evaluation period.

The formulation showed:

- Good homogeneity and uniformity.
- Acceptable viscosity suitable for external application.
- Pleasant spread ability on the skin.
- Good stability under normal storage conditions.
- Absence of skin irritation upon topical application.
- Effective absorption into the skin during massage.

CONCLUSION

Kshirabala Oil is a valuable Ayurvedic medicated oil with nourishing and Vata-balancing properties. Proper preparation ensures its effectiveness in managing neurological and

musculoskeletal disorders. It is extensively used in Ayurvedic treatment for neurological and musculoskeletal disorders. Proper manufacturing, quality control, and storage are essential for obtain in gas table and effective product. Owing to its therapeutic significance and traditional acceptance, Shirbala Oil continues to play an important role in Ayurvedic healthcare.

REFERENCES

1. Sahasrayogam. K.V. Krishnan Vaidyar (Ed.). Vidyarambham Publishers, Alappuzha, Kerala. Reprint Edition.
2. Bhaishajya Ratnavali. Edited by Govind Das Sen. Chaukhambha Sanskrit Bhawan, Varanasi.
3. Sharangadhara Samhita. Translated by Prof .K. R. Srikantha Murthy. Chaukhambha Orientalia, Varanasi.
4. Ayurvedic Formulary of India. Part I&II. Ministry of AYUSH, Government of India.
5. The Ayurvedic Pharmacopoeia of India. Ministry of AYUSH, Government of India.
6. Dravyaguna Vijnana. Chaukhambha Bharati Academy, Varanasi.
7. P. V. Sharma. Dravyaguna Vijnana, Vol. II. Chaukhambha Bharati Academy, Varanasi.
8. Text book of Pharmacognosy. By C. K. Kokate, A. P. Purohit, and S.B. Gokhale. Nirali Prakashan.
9. Quality Standards of Indian Medicinal Plants. Indian Council of Medical Research, New Delhi.
10. Ministry of AYUSH. Official publications and guidelines on Ayurvedic formulations.
11. Sida cordifolia. Monographs in Ayurvedic Pharmacopoeia of India.
12. Indian Medicinal Plants. International Book Distributors, Dehradun.
13. Database on Medicinal Plants Used in Ayurveda. Central Council for Research in Ayurvedic Sciences.

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Received Date: August 27, 2026

Accepted Date: August 28, 2026

Published Date: August 31, 2026

Citation: Dr. Nikhil N. Jadhav, Anisha Takankhar, Pooja Rode, Raj Jadhav. Formulation of Shirbala Oil. Journal of Dravyaguna Vigyan, Rasashastra & Bhaishajya Kalpana. 2026; 4(2): 64-75p.