ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 9| September 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

PHARMACEUTICO-ANALYTICAL STUDY OF GUNJADYA TAILA

Vd. Sachin Sheth[1], Vd. G. R. Asore[2], Dr. Shailaja Singh[3]

[1]Assistant Professor, Department of Rasashastra and Bhaishajya Kalpana, APM's Ayurved Mahavidyalaya, Sion, Mumbai - 22.

[2]HOD & Professor, Department of Rasashastra and Bhaishajya Kalpana, APM's Ayurved Mahavidyalaya, Sion, Mumbai - 22.

[3]MD Scholar, Department of Rasashastra and Bhaishajya Kalpana, APM'S Ayurveda Mahavidyalaya Sion Mumbai - 22

Author for Correspondence: *Dr. Shailaja Singh, Department of Rasashastra and Bhaishajya Kalpana, APM'S Ayurveda Mahavidyalaya, Sion, Mumbai – 400022*

ABSTRACT

Rasashastra and Bhaishajya Kalpana are two important branches of Ayurveda. Rasashastra focuses on specialized formulations involving minerals and metals and Bhaishajya Kalpana consists the medicinal preparations including herbs, plants, and other natural substances. It plays a critical role in the preparation, standardization, and application of medicines.

Sneha Kalpana is a specific category of Bhaishajya Kalpana that involves the preparation of herbal oils or ghee as base infused with the therapeutic properties of herbs. These formulations are used both internally and externally for various therapeutic purposes i.e. Pana, Abhyanga, Nasya, and Basti. In Sneha kalpana Kalka, Kwatha, or Drava Dravya are used in precise proportions

This article gives a better understanding of the action and therapeutic potential of Gunjadya Taila a classical Ayurvedic formulation mentioned in Galgandadiroga Chikitsa Chapter of Bhaishajya Ratnavali and Chakradatta. .Gunjadya Taila is used for various therapeutic uses, especially in skin disorders like Apachi, Nadi Vrana, Arsha, Arbuda and Vrana. This study aims to highlight the process of the preparation method of Gunjadya Taila, and its analytical evaluation to ensure standardisation and quality control.

KEYWORDS: *Taila, Sneha Kalpana, Bhaishajya Kalpana.*

INTRODUCTION

Sneha Kalpana is an integral component of *Bhaishajya Kalpana* in *Ayurveda*, involves the methodical preparation of medicated oils (*Taila*) and Ghee (*Ghrita*) by incorporating herbal decoctions and pastes into lipid media. This classical dosage form is widely employed for both *Shamana* and *Shodhana* purposes, particularly due to its enhanced drug absorption and deep tissue penetration. [1].

Taila Kalpana is one of the important branches of *Sneha Kalpana* described in Ayurvedic pharmaceutics. It refers to the preparation of medicated oils (*herbal oleaginous formulations*) in which *dravyas* (herbs, minerals, or other substances) are processed with a base oil, usually *Tila Taila* (sesame oil), by following a specific method. This procedure allows the active principles of the drugs to be absorbed into the oil medium, thereby enhancing their potency, stability, and therapeutic applicability.

Classical texts mention sesame oil as the best base because it has qualities like easy absorption and the ability to carry the qualities of the drugs added to it. The process of preparing medicated oil also improves the colour, smell, and stability of the formulation.

These oils are widely used both internally and externally in Ayurveda—for massage (*abhyanga*), *shirodhara*, enemas (*basti*), and sometimes even oral use. They help to balance aggravated *doshas*, nourish tissues, and treat conditions such as skin diseases, inflammation, and degenerative disorders. From a modern view, *Taila Kalpana* can be compared to an oil-based drug delivery system, which improves absorption of both fat-soluble and water-soluble compounds and increases shelf life.

Among the numerous *Taila Kalpanas* documented in the *Samhitas*, *Gunjadya Taila* holds a place of therapeutic significance. Described in texts like *Bhaishajya Ratnavali* and *Chakradatta*, this formulation is indicated primarily in the management of *Apachi, Nadi Vrana, Arsha, Arbuda and Vrana* the present study aims to prepare *Gunjadya Taila* using classical *Sneha Kalpana* methodology and evaluate its physicochemical characteristics using contemporary analytical parameters.[2]

AIM & OBJECTIVES

1. To prepare Gunjadya Taila as mentioned in Bhaishajya Ratnavali.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 9| September 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

2. To carry out Physico chemical analysis of the Gunjadya Taila.

MATERIAL & METHODS

Raw Materials

Trivruta Moola, Sarshap seeds, Tila Taila, Panchlavan, Pippali and *Maricha* were bought from reliable place. *Arka moola, Gunja Moola, Karveer Moola* were collected locally. Fresh *Gomutra* was procured daily from nearby cattle shed.

Authentication of Raw Materials

Trivruta Moola, Arka moola, Gunja Moola, Karveer Moola, Sarshap seeds, Tila Taila, Panchlavan, Gomutra, Pippali and *Maricha* were authenticated from a reliable and recognized laboratory.

Equipment

Weighing Machine, Mortar and pestle *(Khalva yantra*),Measuring Cylinders, Stove and gas Cylinders, Spoons, Spatulas/ Tongs, Glass Beakers, Stainless Steel vessels, Sieves and other Instruments as per need

Table No. 1: Ingredients used for preparation of Gunjadya Taila [3]

Sr. No.	Ingredients	Latin Name	Part Used	Quantity
1	*Gunja*	Abrus Precartorius	Root	1.25 kg
2	*Karveer*	Nerium Indicum	Root	1.25 kg
3	*Shyama Trivrut*	Ipomea Turpethum	Root	1.25 kg
4	*Arka*	Calatropis Gigantea	Root	1.25 kg
5	*Sarshap*	Brassica Campestris	Seed	1.25 kg
6	*Tila Taila*	Sesamum Indicum	Seed Extract	2.5 litres
7	*Gomutra*	Cow Urine	Urine	100 litres
8	*Pippali Churna*	Piper Longum	Fruit	12.5 gm
9	*Maricha Churna*	Piper Nigrum	Fruit	12.5 gm
10	*Saindhava Lavana*	-	-	12.5 gm
11	*Samudra Lavana*	-	-	12.5 gm
12	*Vida lavana*	-	-	12.5 gm
13	*Sauvarchal Lavana*	-	-	12.5 gm
14	*Romak lavana*	-	-	12.5 gm

Method

1. Preparation of the *Gunjadya Taila* was done as per the general method of preparation of *taila* i.e., 1/4th part of *kalka* (paste) of *Moola* of dravyas *and,* 1 part of *Tila taila* (sesame oil) and 4 parts of *drava dravya* (liquid) (1/4:1:4).
2. *Drava dravya* (liquid) used in the preparation of Gunjadya Taila is *Gomutra,*
3. *Moola* of *Gunja, Karveer, Shyama, Arka* and *Sarshap* Seeds are taken and crushed in the *Khalva Yantra* and made into kalka. Each dravya weighed 125 gms.
4. Then 2500 ml *Tila taila* was taken in a clean wide mouthed stainless steel vessel and it is kept over the fire, when fumes started appearing, 625 g of *kalka* (paste) of drugs were added slowly to it followed by adding 10 litres *Gomutra*,.
5. Mild heat was given throughout the procedure. Stirring was done continuously with the help of spatula. After the observation of *sneha siddhi lakshana* (confirmatory tests for oil), the *Taila* was filtered through a clean cloth, the obtained *oil* was measured.
6. This process is repeated 10 times. Each time same amount of *kalka* along with 10 litres of *Gomutra* is used. After this *Prakeshpa dravya* like *Pippali* and *Maricha Churna* along with *Panch Lavan* was added to the *Taila*.
7. Thus the *Gunjadya Taila* was prepared and it was stored in an airtight container.

Precautions

- The vessel used for the process should be clean and of adequate size, in order to avoid spilling of *Taila* because of excess foaming during *Paka*.
- *Mandagni* should be maintained throughout the process.
- Continuous stirring should be done to avoid the sticking of *Kalka* to the vessels.
- Timely performance of the *Paka Siddhi Parikshas* and observations of *Siddhi Lakshanas*
- Clean cloth should be taken for filtration purpose.
- Taila should be filtered immediately (warm condition) to avoid the loss. Taila should be filled in the suitable container.

ANALYTICAL STUDY :[4]

Gunjadya Taila was analysed in accordance with the guidelines mentioned in authoritative Ayurvedic texts. The evaluation comprised both organoleptic assessment and physico-chemical testing. Organoleptic examination was carried out to study the morphological features such as colour, odour, and texture. Physico-chemical analysis included determination of pH, specific gravity, viscosity, total suspended solids, refractive index, saponification value, acid value, rancidity, peroxide value, and iodine value. All analytical procedures were performed in the Quality Control Laboratory of recognised laboratory.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 9| September 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

OBSERVATIONS

Table No. 2: Pharmaceutical Observations of Gunjadya Taila

Sr. No	Observations	Gunjadya Taila
1.	Total days	10
2.	Total Hours	120 hours
3.	Quantity Of Each Kalka Dravya	125 gm
4.	Total Quantity of Taila taken	2.5 litres
5.	Total Quantity obtained	990 ml
6.	Percentage loss	60.4%

Table No. 3: Taila siddhi lakshana [5]

Sr. No.	Lakshana (Classical Sign)	Observation Noted
1.	*Vartivat Sneha Kalka*	Kalka was easily rolled into a soft, unbroken wick (*varti*), indicating proper consistency.
2.	*Shabdahino Agni Niksiptah*	No crackling or spluttering sound was observed, suggesting complete evaporation of moisture.
3.	*Phenodgama Taila*	Mild frothing noted during the terminal stage of heating,
4.	*Gandha Utpatti*	A typical odour resembling *Gomūtra* was perceived, which aligns with classical descriptions.
5.	*Varna Utpatti*	The prepared *Taila* exhibited a dark brown colour,
6.	*Rasa Utpatti*	Tasting was not performed due to toxic nature of Ingredients

Analytical Study of Gunjadya Taila

The analytical study like organoleptic and physico-chemical parameters of *Gunjadya taila* were carried out and results are given in Table no. 4 and Table no. 5

Table No. 4: Organoleptic observations of finished Gunjadya Taila

Sr. No.	Observations	Gunjadya Taila
1.	Appearance	Clear oil
2.	Colour	Dark Brownish colour
3.	Odour	Like Cow's Urine
4.	Consistency	Oily

Table No. 5: Analytical observations of finished Gunjadya Taila product:

	Parameter	Values
1.	pH	6.3
2.	Rancidity	Negative
3.	Specific Gravity	0.9192
4.	Refractive Index	1.462
5.	Peroxide Value	5.35
6.	Saponification value	118
7.	Unsaponifiable Matter	1.19 %
8.	Acid value	1.2
9.	Iodine value	76
10.	Viscosity at 30°C	35.45

DISCUSSION

Gunjadya Taila is a classical formulation prepared from the roots of *Gunja*, *Arka*, *Karveer*, *Shyama Trivrut*, and *Sarshap* seeds in equal proportion, cooked in *Tila Taila* with *Gomutra*, to which *Pippali*, *Maricha* and *Panch Lavan* are later added. The chief ingredients—*Gunja*, *Arka*, and *Karveer*—are known as poisonous drugs but possess significant anticancer potential, while *Shyama Trivrut* acts as a strong purgative useful in clearing excess *Kapha* and *Pitta*. Bioactive compounds of *Gunja* exhibit anticancer, antioxidant, and immunomodulatory activity without harming normal cells; similarly, *Arka* and *Karveer* demonstrate cytotoxic and dermatological benefits. *Tila Taila* serves as a nourishing and strengthening base, beneficial in *Vata* disorders and supportive of wound healing. The combined properties of *Karveer*, *Arka*, *Gunja*, *Trivrut*, and *Maricha* with *Katu rasa*, *Ushna virya*, and cytotoxic potential, along with *Pippali's Tridoshahara* action, suggest that this formulation may be effective against cancer and skin disorders.[6]

The analytical evaluation of *Gunjadya Taila* provides significant insight into its quality, stability, and therapeutic potential. The organoleptic findings, including its characteristic dark brownish colour, oily texture, and specific odour

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 9| September 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

resembling *Gomutra*, are consistent with the ingredients used in its preparation and align with the descriptions available in classical texts. Such features serve as important preliminary indicators for standardisation and authentication of traditional formulations.

The physico-chemical parameters observed in the present study highlight the stability of the oil. The pH value of 6.3 suggests a slightly acidic nature, which is generally considered favourable for topical application as it supports skin health and prevents microbial overgrowth. The viscosity value (35.45) indicates moderate fluidity, which facilitates easy spreading and absorption—properties desirable in medicated oils intended for external use. The iodine value (76) points towards a low degree of unsaturation, making the oil relatively resistant to oxidative rancidity. Similarly, the saponification value (118) reflects the presence of medium-chain fatty acids, which confer stability while retaining the therapeutic essence of the formulation.

The acid value (1.2) and peroxide value (5.35) were both within acceptable limits, confirming that the oil has low levels of free fatty acids and minimal peroxidation. This demonstrates good preservation status and indicates that the formulation is unlikely to undergo rapid deterioration. The absence of rancidity further supports the overall stability and usability of *Gunjadya Taila* over time. Such parameters are critical in validating the shelf-life and therapeutic reliability of classical oils, which otherwise face challenges in commercial standardisation.

The TLC analysis provided a distinctive chemical fingerprint for *Gunjadya Taila*. The presence of a compact bluish band at Rf 0.30, indicative of terpenoid or steroidal constituents. The faint band at lower Rf values represented non-specific lipidic components, which are typical in medicated oils. The identical TLC pattern between test and reference samples highlights the reproducibility of the formulation process across different batches, thereby establishing consistency and authenticity.

CONCLUSION

Sneha kalpana have longer shelf life, extraction of fat soluble as well as water soluble active principle at a time in a single formulation and quick in absorption. *Gunjadya taila* is mainly used in *Apachi, Nadi Vrana, Arsha, Arbuda and Vrana*. Ingredients of *Gunjadya taila* are roots of *Gunja, Arka, Karveer* and *Shyama Trivrut* that are easily available, formulation is easy to prepare and cost effective. The total oil obtained during pharmaceutical preparations was around 40% and the loss was 60 % as the paka was done 10 times. The standard analytical parameters of *Gunjadya Taila* is not available in API and AFI. Hence analytical studies conducted on the *Gunjadya taila* can be taken as preliminary standards. Though not commercially available, *Gunjadya Taila* reflects the therapeutic potential of traditional Ayurvedic medicine and analytical parameters show it is safe for external application.

REFERENCES

1. *Tripathi B. Sharangdhar Samhita. Varanasi: Chaukhamba Surbharti Prakashan. 2017.*
2. *Rajeshwara Dutta S, Ambika Dutta S. Bhaishajya Ratnavali. Galgandadiroga chikitsa. 14th edition. Varanasi: Chaukambha Sanskrit Sansthana; 2005. p.831*
3. *Rajeshwara Dutta S, Ambika Dutta S. Bhaishajya Ratnavali. Galgandadiroga chikitsa. 14th edition. Varanasi: Chaukambha Sanskrit Sansthana; 2005. p.831*
4. *The Ayurvedic Pharmacopoeia of India part 1, Volume 2. First edition. Civil lines Delhi: The controller of the publication; 1999. Pg. 140-203*
5. *Tripathi B. Sharangadhara samhita. Varanasi: Chaukambha Surabharati Prakashan, 2001, Madhyam khanda, Chapter 9, Shlok no. 12-13*
6. *Chunekar KC, Edited by Pandey GS. Bhavprakash Nighantu. Varanasi : Chaukhamba Bharti Academy; 2002.*