

## ***A COMPARATIVE ANALYTICAL STUDY OF KASISADI TAILA AND JATYADI TAILA***

**Vipul Patel<sup>1</sup>, Manjusha Rajgopalan<sup>2</sup>, Darshan Parmar<sup>3</sup>**

<sup>1</sup>Associate professor, Department of Shalya Tantra , Government Ayurved College, Vadodara, Gujarat, India

<sup>2</sup>Head, Department of Shalaky tantra, AIIM, Delhi, India

<sup>3</sup>Deputed Assistant professor, Post graduate Department of Rasashastra and Bhaishajya Kalpana, Government Ayurved College, Vadodara, Gujarat, India

**Email:** [vipulpatelmsayu@gmail.com](mailto:vipulpatelmsayu@gmail.com)

### ABSTRACT

In Ayurveda, only *Sneha* preparations are used through all routes of drug administration, e.g. nasal, rectal, topical, and oral. Among them *Taila kalpanas* are widely used for *Vranashodhana* and *Vranaropana*. The present study deals with the comparative analysis of *Kasisadi taila* and *Jatyadi taila* in context to *Vranashodhana* and *Vranaropana*. Both *Tailas* were analyzed to find out the Loss on drying, Specific gravity, pH value, Ash value, and Qualitative analysis of Ash for Iron and for Sulphate, Acid Value, Refractive index and saponification value. *Kasisadi Taila* is found more acidic (pH-3.7 and Acid Value-6.5389) in compare to *Jatyadi taila*. This obtained organo-leptic parameters and physico-chemical parameters may be used as pharmacoepial standards of *Kasisadi taila* and *Jatyadi taila*.

**Keywords:** *Jatyadi Taila, Kasisadi taila, Standardization, Vranashodhana, Vranaropana*

### INTRODUCTION

In Ayurvedic classics there are a lot of single and compound drugs which mentioned in several contexts. Most of them are not re-tested according to the current research methodology. Unless the drug is tested through this methodology the drug will not get proper recognition in the scientific world. The logical application of these spectra according to the dif-

ferent stages and conditions of the patient and disease is the prime key for the suitability of that drug in a given disease.

In Ayurveda, only *Sneha* preparations are used through all routes of drug administration, e.g. nasal, rectal, topical, and oral. Among them *Taila kalpanas* are widely used for *Vranashodhana* and *Vranaropana*. *Jatyadi taila* is

prescribed by many Acharyas for *Vrana ropana* (wound healing) while *Kasisadi taila* is used for *Vrana shodhana* and *Arshashatana*. According to *Bhaishajya ratnavali Kasisadi taila* is mentioned that it destroys the *Arsa* like *Kshara* without hampering the normal structure of *Guda*<sup>1</sup>.

The present study deals with the comparative analysis of *Kasisadi taila* and *Jatyadi taila* in context of *Vranashodhana* and *Vranaropana*. Both *Tailas* were analyzed to find out the Loss on drying, Specific gravity, pH value, Ash value, and Qualitative analysis of Ash for Iron and for Sulphate, Acid Value, Refractive index and saponification value.

#### Materials and Methods:

*Kasisadi Taila*<sup>2</sup> having *Kasisa* (FeSO<sub>4</sub>·7H<sub>2</sub>O), *Hartala* (AS2 S3), *Vidanga* (fruit of *Embelia ribes* Brum.f.), *Karavira* (Root of *Nerium indicum* Mill.), *Karanja* (Bark of *Pongamia pinnata* Pierre.), *Saindhava* (Rock salt), *Jambu* (Seed of *Syzygiumcumini* Linn.skeels), *Kritvedhana* (Fruit of *Luffa acutangula*.L.Roxb.), *Chitrakmoola* (Root bark of *Plumbagozeylanica* .Linn.), *Dantimoola* (Root of *Baliospermummontanum* Wild.Moll.Arg.), *Arkakshira* (latex of *Calotropisproceraya* Aiton ory and.), *Snuhi kshira* (latex of *Euphorbia nerifolia* auct.Non Linn.), *Tila taila* (Sesame oil).

*Jatyadi taila*<sup>3</sup> consists *Jatipatra* (Leaves of *Jasminum grandiflorum* L.), *Nimb patra* (Leaves of *Azadirachta indica*A.Juss.), *Patolapatra* (Leaves of *Tricosanthes dioica* Roxb.), *Naktamalapatra* (Leaves of *Pongamia pinnata*Oierre.), *Siktha* (Honey bee wax ), *Madhuka* ( Root of *Glycyrrhiza glabra* Linn.), *Kustha* ( Root of *Saussuria lappa* Decne.Sch. Bip.), *Nisa* (Rhizome of *Curcuma longa*

Linn.), *Katurohini* (Root of *Picrorhiza kurroa* Royle exBenth.), *Manjistha* (Root of *Rubia cordifolia*L.), *Padmaka* (Bark of *Prunus pud-dam* Franch.), *Lodhra* (Bark of *Symplocos racemosa* Roxb.), *Abhaya* (Pericarp of *Terminalia chebula* Retz), *Nilotpala* (Flower of *Nelumbium speciosum*Wild.), *Tuttha* (Copper sulphate ), *Sariva* (Root of *Hemidesmus indicus* L. R.Br.) , *Naktamal bija* (Seed of *Pongamia pinnata*Pirre.), *Tila taila* (Sesame oil).

Both *Taila* were prepared in the pharmacy unit of Gujarat Ayurved University, Jamnagar. The drugs were checked for their quality and used for preparation .Raw drugs were washed and grinded, prepared the *Sneha kalpana* according to *Sharangdhar Samhita*.<sup>4</sup>

#### Analytical methods:-

1. Organo-leptic parameters
2. Physico-chemical Parameters

#### Results and observations:-

##### Organoleptic parameters

The organoleptic characters like colour, taste, odour and touch of *Kasisadi taila* and *Jatyadi taila* were observed. Colour of *Kasisadi taila* was Dark brown while *Jatyadi taila* was Yellowish green. Taste and odour of both samples were unpleasant, but odour of *Jatyadi taila* was milder than *Kasisadi taila*. Both samples were sticky in touch whereas *Jatyadi taila* was found less sticky.

##### Physico-chemical Parameter

Physico chemical parameters are applied scientific evaluations of crude drugs and prepared drugs. These parameters are the part of pharmacognosy which deals with botanical and physio-chemical and economical features

of the drugs. As per W.H.O. guidelines Physico chemical parameters for oil preparations were analyzed like below<sup>5</sup>.

**Loss on drying:** Results shows that at 110<sup>o</sup>c temperature in *Kasisadi Taila* there was 0.7 % loss on drying, while in *Jatyadi Taila* loss was 0.9%. Naturally it is desired that the moisture content should be minimum, which will help, in the long storage of the product. Means Moisture content of *Kasisadi Taila* was less than *Jatyadi Taila* but the difference was not more than 0.2%.

- **Specific Gravity:** The data reveals that Sp. Gravity which was 0.9157 in *Jatyadi Taila* while in the *Kasisadi Taila* Sp. gravity was 0.9235. These changes indicate that addition of soluble materials in *Kasisadi Taila* was more than *Jatyadi Taila* during the preparation.
- **pH Value:** The results of determination of pH indicate that pH of *Kasisadi taila* was 3.7 while pH of *Jatyadi taila* was 5.6. Which emphasize that *Kasisadi Taila* was more acidic than *Jatyadi Taila*.
- **Ash Value:** The data reveals that Ash value of *Kasisadi Taila* was 0.024 % w/w, while Ash value of *Jatyadi Taila* was 0.0018 %w/w. which highlight that moisture content was less in the *Kasisadi Taila* than the *Jatyadi Taila*.
- **Qualitative Analysis of Ash (For Iron & Sulphate):** The positive results of qualitative analysis of ash of *Kasisadi taila* for iron & Sulphate emphasize that Fe<sup>++</sup> and So<sub>4</sub><sup>-</sup> - the particles of *Kasisa* (Ferrous Sulphate) were present in the oil. Generally *Kasisa* is not soluble in the oil but in this preparation, it was possible due to

such type of herbal compound which made soluble it in the oil.

- **Acid Value:** The results of determination of Acid value indicate that acid value of *Kasisadi taila* was 6.5389 while acid value of *Jatyadi taila* was < 4.0. Which emphasize that *Kasisadi Taila* was highly acidic then *Jatyadi Taila*.
- **Refractive Index:** The data reveals that at the 40<sup>o</sup>c temperature Refractive index of *Kasisadi Taila* was 1.4750; while Refractive index of *Jatyadi Taila* was 1.4657.
- **Saponification Value:** the results shows that Saponification value of *Kasisadi Taila* was 189.198, while Saponification value of *Jatyadi Taila* was 186. Which indicate that non saponifiable material is less in the *Kasisadi taila* then the *Jatyadi Taila*.

## DISCUSSION AND CONCLUSION

*Kasisadi Taila* is found more acidic (pH-3.7 and Acid Value-6.5389) in compare to *Jatyadi taila*. (pH-5.6 and Acid Value-<4.0) It indicates that somewhat corrosive nature of *Kasisadi taila* which prove its *Vranashodhana* and *Arshashatana* activity. Generally *Kasisa* is not soluble in the oil but in *Kasisadi taila*-the particles of *Kasisa* i.e. Fe<sup>++</sup> and So<sub>4</sub><sup>-</sup> were found present. It indicates that we can utilize the properties of *Kasisa* i.e. Astringent/*Sankochak* and *Vatakapha hara* externally with the help of this oil preparation. In present study main differences between *Vranashodhana Taila* (*Kasisadi taila*) and *Vranaropana Taila* (*Jatyadi taila*) were found in pH and acid value.

The obtained parameters can be considered as pharmacoepial standards to determine the efficacy of *Kasisadi taila* as *Vranashodhana* and

Arshashatanawhile Jatyadi taila as Vranaropana. It may be useful for verification and comparison in the future studies.

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