ejpmr, 2021,8(8), 437-440.

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

PHARMACEUTICO ANALYTICAL STUDY OF *ASTAKATAVARA TAILA*

Neha Semwal*[1], Ambika S.[2], Joy Namasudra[3] and Govinda Sharma K.[4]

[1,2,3]Post Graduate Scholars, [4]Professor

Department of Rasashastra and Bhaisajya Kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan- 573201.

***Corresponding Author: Neha Semwal**

Post Graduate Scholars, Department of Rasashastra and Bhaisajya Kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan- 573201.

Article Received on 03/06/2021 **Article Revised on 24/06/2021** **Article Accepted on 15/07/2021**

ABSTRACT

Concept of *taila* under *Sneha kalpana* is well recognised in ayurvedic pharmaceutics for its use in various therapeutic purposes. *Astakatavara taila* is also one such formulation which is mentioned to be used in *Grudhrasi.* In the present study, *Astakatavara taila* was prepared as per standard operative procedures of Ayurvedic pharamacopeia of India for *taila* preparation. As there is no analytical standards available for *Astakatavara taila* in Ayurvedic pharmacopeia of India to check its quality. In this study an effort has been made to prepare *Astakatavara taila* and to check its physico-chemical parameters. The results obtained can be considered as preliminary standards of *Astakatvaratailа taila*.

KEYWORDS: *Astakatavara taila, Grudhrasi, katavara, Sarsapa taila, pippali mula, Nagara*.

INTRODUCTION

Sneha Kalpana is one of the widely used and preferred dosage forms of Ayurvedic system of medicine. It is a pharmaceutical procedure which is followed to produce an oleaginous medicament from the substances such as *kalka, kwatha*, and *drava dravya*, in specific proportions by subjecting them to a specified heating pattern and duration.[1]

Sneha kalpana are considered superior to other dosage forms due to its advantages such as increased absorption, bioavailability, and extraction of fat soluble as well as a water soluble active principle at a time in a single formulation.[2]

One such formulation is *Astakatvara taila* which is indicated in G*rudhrasi*. It comprises *of Pippali mula, Nagara, Sarsapa taila, Dadhi and Katvara.*[3] In this present study, the method of preparation and analytical parameters have been discussed.

MATERIAL AND METHOD

PHARMACEUTICAL STUDY OF *ASTAKATVARA TAILA*

Table 1: Ingredients of *Astakatvara Taila.*[3]

Sl NO	Botanical Name	Parts Used	Quantity	Taken quantity
Pippali mula	*Piper longum*	Root	2 part	5gm
Nagara	Zingiber officinale	Rhizome	2 part	5gm
Sarsapa taila	Sesamum indicum	seed Oil	16 part	80ml
Dadhi	Curd	Curd	16 part	80ml
Katvara	Butter milk	Buttermilk	128 part	640ml

Method of preparation

Present work of Pharmaceutico- analytical study and standardisation of *Astakatavra taila* was divided into two parts:

1. Pharmaceutical study
2. Analytical study

Pharmaceutical study

The pharmaceutical study deals with the whole process of preparation of medicine beginning from collection of drugs to obtaining the final product. It is divided into the following sections:

A. Collection of the drug

B. Preparation of *Asta katvara taila*

A. Collection of the drug

The raw drugs required for the preparation of medicine were procured from Teaching Pharmacy Shri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital Hassan Karnataka.

B. Preparation of *Asta katvara Taila*

Guidelines of *Sneha kalpana* given in AFI.[4] were followed for preparation of *Astakatvara taila*. The drugs were taken as per the quantity specified in table 1. *Katvara* was prepared by adding 1 part of curd with 4 parts of water.

Sarsapa taila is heated on mild fire and *kalka* of fine powder of *Pippali* and *Nagara* was added followed by the addition of *Katvara* and *dadhi* in specified ratio and continuously heated on medium heat for till *siddhi Lakshna* such as froth appearance, desired colour, odour and taste of drug were observed. The range of *Agni* for preparation of *Taila* was maintained at 90 – 94 ^{0}C. It took 2 hours for the *taila Paka* to be completed. Once the *Siddhi Lakshna* are attained, *Taila* is removed from fire and filtered with the help of a cotton cloth. The filtration was done while the *Taila* was warm to avoid any loss.

Fig1. *Shunthi* (fine powder)

Fig2. *Pippali*(fine powder)

Fig3. Curd

Fig4. *Sarsapa taila*

Fig5. Addition of *kalka*

Fig6. Addition of *dadhi* and *katvara*

Fig7. *Taila paka*

Fig8. Filtration of *taila*

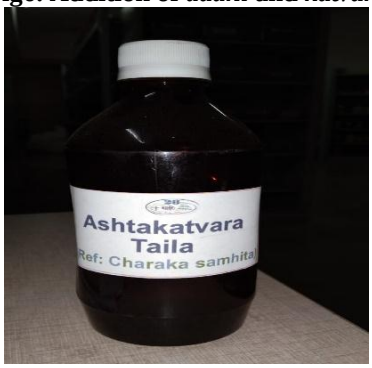

Fig9. Final product

Table 2: *Rasa Panchaka* of *Asta Katvara Taila.*

Sanskrit name	*Rasa*	*Guna*	*Virya*	*Vipaka*	*Karma*
Pippali mula	*Katu*	*Tikshna*	*Ushna*	*Katu*	*Vata-kapha shamana*
Nagara	*Katu*	*Laghu,Snigdha*	*Usna*	*Madhura*	*Vata-kapha hara*
Sarsapa taila	*Katu,Tikta*	*Laghu,snigdha*	*Ushna virya*	*Katu*	*Kapha-vata hara*
Katvara	*Madhura*	*Laghu*	*Ushna*	*Katu*	*Vata-kapha hara*
Dadhi	*Madhura*	*Laghu*	*Ushna*	*Katu*	*Vata-hara*

PHYSICO CHEMICAL AND ANALYTICAL STUDY OF ASTA KATAVARA TAILA

Organoleptic characters- colour, odour, consistency and touch were analysed.

Physico chemical parameters- Specific gravity, pH value, refractive index, viscosity and rancidity were analysed.[5-9]

1. Specific gravity

Specific gravity is the ratio of the weight of the substance in air at a specific temperature to that of an equal volume of water at the same temperature to that of an equal volume of water at the same temperature.

Specific gravity = Weight of the substance in air / equal volume of water.

2. Determination of pH value

The pH value of an aqueous liquid may be defined as the common logarithm of the reciprocal of the hydrogen ion concentration expressed in g/litre. The pH value of a liquid can be determined potentiometrically by means of the pH meter.

3. Refractive index

Refractive index at 30^0c was checked by Abbe's refractometer.

4. Viscosity

Viscosity is a fluid's resistance to flow. Also described as a fluid's thickness. It is measured with the help of a viscometer.

Viscosity of liquid may be determined by any method that will, measure the resistance to shear offered by the liquid.

5. Rancidity

1ml of *taila* was mixed with 1ml of conc. HCl and 1ml of 1% solution of phloroglucinol in diethyl ether and then mixed thoroughly with the fat acid mixture. A pink color indicates that the fat is slightly oxidized while a red color indicates that the fat is definitely oxidized.

OBSERVATION AND RESULTS

Pharmaceutical observation

During the preparation of *Asta katvara taila*, *Kalka* attained perfect shape when rolled between fingers. When part of *kalka* was put into fire no sound was produced. Foam was produced and desired colour, odour and taste of the ingredients became appreciable as the preparation was completed.

Volume of end product

Sarsapa taila was taken 80 ml and Obtained quantity was 70ml.

Table 3: Evaluation of organoleptic characters.

Test	Results
Colour	Golden yellow
Odour	Pleasant
Consistency	Greasy
Touch	Smooth

Table 4: Physico chemical parameters.

Parameters	Results
Specific gravity	0.15
pH	5.2
Refractive index	1.476
Viscocity	60.01
Rancidity	Slightly oxidised

DISCUSSION

Raw material procured, were from authentic source. Minimum parameters required to evaluate the quality of taila preparation were selected.

Specific gravity indicates the presence of solute content in the solvent. Specific gravity of *Asta katvara taila* was found out to be 0.15, pH was 5.2 which is less acidic, because of the ingredients used in the preparation.

Refractive index is a fundamental physical property of a substance often used to identify a particular substance, confirm its purity, or measure its concentration.[9] Value of refractive index of *Asta katvara taila* was 1.476. It indicates the density of sample compared to air and liquid media.

Viscocity is the index of resistance offered by the surface to flow of a liquid, higher the viscosity of the liquid, greater is the resistance to flow. If viscosity of the oil preparation increases, rate of absorption decreases. If oil is less viscous this means rate of absorption is high. Viscocity of *Asta katvara taila* is found to be 60.01cps.

Rancidity is the process of complete or incomplete oxidation or hydrolysis of fats and oils when exposed to air, light, or moisture or by bacterial action, resulting in unpleasant taste and odour. The rancidity of *Asta katvara taila* was slightly oxidised.

Organoleptic study showed that appearance, odour, and touch meet the required parameter.

Paka was done on *Mandagni*, which enables the proper dissociation of active principles into the *Taila.* And this temperature range helps to attain correct *Paka laksana* without any charring.[10]

Asta katvara taila is used to help in the management of *Grudhrasi* which is caused by the imbalance of *vata* and *kapha Dosha*.

Sarsapa taila is used as a base for the preparation. It is *Ushna virya*, and having *Kapha vata hara* property. *Katvara* used in the formulation is having *Ama pachana* action.[11] *Pippali* and *Nagara* is also *Katu rasa* and having *Ushna virya* and *Katu vipaka*. Almost all the ingredients are having *vata kaphahara*, *Vedana sthapana* and *Deepana-pachana* property which in turns helps in reducing the symptoms associated with *Grudhrasi*.

CONCLUSION

Astakatvara taila is indicated in *Grudhrasi* for internal administration. With the classical reference in back drop *Asta katvara taila* was prepared in lines with the standard operating procedures (SOP) and subjected for physico chemical analysis. The obtained values of physico-chemical analysis can be considered as preliminary standards of *Astakatvarataila.*

REFERENCES

1. Karande MN, Desai S. Concept of taila kalpana in ayurvedic pharmaceutics-a critical review, Ayurline. Int J Res Indian Med., 2017; 1: 55-62.
2. Goyal M, Prajapati PK. The hypothetical view: role of media in sneha paka. Innoriginal International Journal of Sciences, 2015; 2(6): 1-3.
3. Agnivesha,Charaka Samhita; Vatavyadhi adhayaya, chikitsasthana,chap-27 verse -47 vol 5, In Chakrapani Datta's Ayurveda Dipika; Reprint edition, English Translation on Charaka Samhita,Varanasi, Published by Chaukhambha Krishna Das Academy, 2016: 13.
4. Anonymous. The Ayurvedic Formulary of India. Part II. 1st ed. Govt of India. Ministry of Health and Family Welfare. Dept of ISM&H.Delhi: The Controller of Publications Civil lines, 2000; 109.
5. The Ayurvedic Pharmacopoeia of India, e-book, Part II, II, Appendix 3.2: 212.
6. The Ayurvedic Pharmacopoeia of India, e-book, Part II, I, Appendix 3.1: 237
7. The Ayurvedic Pharmacopoeia of India, e-book, Part II, I, Appendix 3.1: 232
8. The Ayurvedic Pharmacopoeia of India, e-book, Part II, I, Appendix 3.7: 240.
9. The Ayurvedic Pharmacopoeia of India, book, Part II, I, Appendix, 3.11: 242.
10. Angadi R. A textbook of Bhaishajya Kalpana Vijnana. 1st ed. Varanasi: Chaukhamba Surbharati Prakashan, 2009; 258.
11. Akshay Vij, Muralidhara Sharma, Prashant Bhat, Sunil Kumar KN. Standardisation of apmargakshara taila. Int. J. Res. Ayurveda Pharm., May–June, 2016; 7(3): 40-45.