



### A PRELIMINARY PHARMACEUTICO-ANALYTICAL STUDY OF ARKA TAILA AND ITS MODIFICATION AS MALAHARA

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#### ABSTRACT

Skin diseases are the most common type of diseases which is seen in almost all the ages. They have a very large impact on the human population. As these diseases are known as *Kushta Rogas* in Ayurveda, they are considered to be one of the eight major diseases in Ayurvedic classics. *Arka Taila* is a unique formulation mentioned in the *Sharangadhara Samhita* which is indicated for *Pama*, *Vicharchika* and *Kacchu*. In the present study, an attempt was made to modify *Arka Taila* into *Arka Taila Malahara* which is an ointment preparation and pharmaceutico-analytical study was carried out for both *Arka Taila* and *Arka Taila Malahara*.

**Key words-** Skin Diseases, *Kushta Roga*, *Arka Taila*, *Arka Taila Malahara*, pharmaceutico-analytical study

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## INTRODUCTION

*Taila kalpana* is one of the four *Sneha Kalpanas*. *Sneha Kalpana* is considered to be “A pharmaceutical preparation of oleaginous medicaments from the ingredients like *Kalka*, *Sneha Dravya* and *Drava Dravya* taken in specific proportion and by subjecting them to unique heating pattern and duration to fulfill certain pharmaceutical parameters, according to the need of therapeutics”.

*Arka Taila*<sup>[1]</sup> is an important formulation described by *Acharya Sharangadhara* in the management of skin diseases like *Pama*<sup>[2]</sup>, *Vicharchika*<sup>[3]</sup> and *Kacchu*<sup>[4]</sup>. Various types of skin diseases are mentioned in Ayurveda under *Kushta Rogas*<sup>[5]</sup>. In Ayurveda, various *acharyas* have mentioned *Kushta* as one of the *Ashta Mahagada*<sup>[6]</sup> (Eight Major Diseases of Ayurveda). It is so common nowadays that almost one third of the population is affected by this disease. *Arka Taila* consists of the medicinal drugs such as *Arka*, *Sarshapa* and *Haridra*.

*Arka*<sup>[7]</sup> is one of the best medicinal drugs for management of various kinds of skin diseases. *Acharyas* have also mentioned it as *Kushtahara Dravya*. Apart from that, it has the specific action against the diseases such as *Arbuda*, *Arsas*, *Gulma*, etc. *Haridra*<sup>[8]</sup> has anti-microbial and anti-inflammatory actions which

promotes healing in case of skin diseases. *Sarshapa*<sup>[9]</sup> is also a drug of choice for skin diseases and itching.

In the present study, *Arka Taila* was modified into *Arka Taila Malahara* as this pharmaceutical modification is need of the hour. *Malahara*<sup>[10]</sup> is an ointment preparation which is having butter like consistency, which becomes very easy for application when it comes to skin diseases. In the preparation of *Malahara*, *Taila* or *Ghrita* is the main ingredient used followed by the *Siktha* which is added and stirred well till the homogenized mixture is obtained.

Hence, an attempt has been made in the present study to prepare *Arka Taila* and its modified form *Arka Taila Malahara* with its analytical study.

### AIM AND OBJECTIVES:-

- To prepare *Arka Taila* as per the classical reference and to carry out its pharmaceutico- analytical study.
- To modify *Arka Taila* into *Arka Taila Malahara* and to carry out its pharmaceutico-analytical study.

### METHODS AND MATERIALS

This is a pharmaceutical and analytical study.

#### Pharmaceutical study

#### Collection of raw materials

The raw materials used for the preparation of *Arka Taila* and *Arka Taila Malahara* were obtained from the Alva's Pharmacy, Mijar, after proper authentication from the Dept. of Dravyaguna Vignana, Alva's Ayurveda Medical College, Moodabidire.

*Arka* leaves were freshly collected and were washed properly to remove the dirt from the leaves.

### Preparation of *Arka Taila*

- The preparation of *Arka Taila* was done as per the classical reference at laboratory of *Rasashastra* and *Bhaishajya Kalpana*, Alva's Ayurveda Medical College, Moodabidire.



**Fig. 1 Preparation of Arka Taila and Arka Taila Malahar**

**TABLE 1: Ingredients of Arka Taila**

S. No.	Name of the Ingredient	Botanical Name	Family	Part Used	Quantity specified
1.	<i>Arka Patra Swarasa</i>	<i>Calotropis gigantea</i> Linn.	Asclepiadaceae	Leaves	1000mL
2.	<i>Sarshapa Taila</i>	<i>Brassica campestris</i> Linn.	Cruciferae	Seeds	250mL
3.	<i>Haridra Kalka</i>	<i>Curcuma longa</i> Linn.	Zingiberaceae	Rhizome	62.5g

### Method of Preparation

- The desired quantity of freshly collected *Arka* leaves were washed properly and wiped.
- It was pounded to fine paste form in a clean *khalwa yantra*.
- The paste obtained was squeezed into another clean vessel through a clean kora cloth. By squeezing the paste, fresh *swarasa* was collected in a vessel. Thus obtained *Arka patra swarasa* was filtered and measured in the measuring jar. The total quantity of *swarasa* taken was 1 litre.
- The above specified quantity of *Haridra* was pounded into fine powder in a clean *khalwa yantra*.
- To this powdered *haridra*, desired quantity of water was added in a *khalwa yantra* and triturated to obtain *Haridra kalka*.
- In a clean wide mouthed vessel, specified quantity of *Sarshapa taila* was taken which was placed over mild fire and heated.
- The prepared *Haridra kalka* was added to the vessel containing *taila* and heating was

continued with frequent stirring.

- Then freshly prepared *Arka patra swarasa* was added to above vessel and heating was continued with mild fire.
- The *taila* was heated with constant stirring till the attainment of *Sneha Siddhi Lakshana*.
- The obtained *Arka Taila* was filtered into the clean airtight container and preserved.

### Preparation of Arka Taila Malahara

#### Method of Preparation

**TABLE 2: Ingredients of Arka Taila Malahara**

	Name of the Ingredients	Quantity specified
1.	<i>Arka Taila</i>	60ml
2.	<i>Siktha</i> (Beeswax)	12g

- 60ml of *Arka Taila* was taken in a clean stainless steel vessel and heated over mild fire.
- When bubbles started appearing, the fire was immediately put off and the content of the vessel was transferred to the clean and dry *khalwa yantra*.

➤ To this *khalwa yantra*, 12g of *Siktha* was added and stirred instantaneously.

➤ The process of stirring was continued till the homogenous mixture of content was obtained. Hence the obtained mixture which was in smooth waxy ointment consistency called as *Arka Taila Malahara*.

### Analytical study

#### Organoleptic Characters

Form, colour and odour were the tests performed for *Arka Taila* whereas form, colour, odour and consistency were the tests performed for *Arka Taila Malahara*.

**TABLE 3: Organoleptic characters of *Arka Taila* are shown as follows**

	Description	Results
1.	Form	Liquid
2.	Colour	Dark Green
3.	Odour	Characteristic

**TABLE 4: Organoleptic characters of *Arka Taila Malahara* are shown as follows.**

	Description	Results
1.	Form	Semi Solid
2.	Colour	Light Green
3.	Odour	Characteristic
4.	Consistency	Smooth and Sticky

### Analytical study

**TABLE 5: Physico-chemical analysis of *Arka Taila* are shown as follows.**

	Descriptions	Results
1.	pH	6.16

### Physico-chemical Analysis

The pharmaceutical analysis of *Arka Taila* was done with parameters like pH, Spreadability, Refractive index, Specific gravity, Saponification, Iodine value.

The pharmaceutical analysis of *Arka Taila Malahara* with parameters like pH, Spreadability, Rancidity, Acid Value, Loss on Drying at 105° C.

### RESULTS

#### Pharmaceutical study

2.	Spreadability	25mm
3.	Refractive Index	1.5104
4.	Specific gravity	0.90
5.	Saponification	211.78
6.	Iodine Value	11.9

**TABLE 6: Physico-chemical analysis of Arka Taila Malahara are shown as follows**

	Descriptions	Results
1.	pH	6.07
2.	Spreadability	9.89
3.	Rancidity	Not oxidized
4.	Acid Value	1.07
5.	Loss on Drying at 105° C	1.28%

## DISCUSSION

In the present study, *Arka Taila* was prepared as per the classical reference of *Sharangadhara Samhita*. The *taila* was prepared as per standard operative procedure where 1 litre of prepared *Arka Patra swarasa*, 250ml of *Sarshapa taila* and 62.5g of prepared *Haridra kalka* were used for the preparation. During the preparation of *Arka Taila*, appropriate *Sneha siddhi lakshanas* were observed and as a result, 120ml of *Arka Taila* was obtained. Thereafter, the *Arka Taila* was modified into *Arka Taila Malahara* by the standard method of *Malahara* preparation where 60ml of prepared *Arka Taila* along with

12g of *Siktha* was used. The total yield of *malahara* obtained was 60g.

As per the available data from the research studies, *Tikta Rasa* of the *Arka Taila* induces cleanness and dryness. It also has the properties of *Krimihara*, *Puyashoshanakara* and *Shodhana* which helps in opening the channels of the wound and also cleaning of the wound. *Ruksha guna* of *Arka Taila* helps in drying the wound as soon as possible and the *laghu guna* of *Arka Taila* has the properties of *lekhana* and *ropana*. *Tikshna guna* of the *Arka Taila* helps in the quicker healing of the wound that is *Shighrakari* by pacifying the *Vata* and *Kapha doshas*. *Ushna guna* of the *Arka Taila*

helps in enhancing the general metabolism which also supports quicker healing<sup>[11]</sup>.

Arka Taila is the medication which is indicated for the diseases such as Pama, Kacchu and Vicharchika as per the classical reference of Sharangadhara Samhitha

The analytical studies were carried out for both samples. The organoleptic characters of prepared samples such as *Arka Taila* showed dark green colour, liquid in form having characteristic odour whereas in case of *Arka Taila Malahara*, it was light green in colour, semi solid in form having smooth and sticky consistency with characteristic odour.

#### **CONCLUSION**

The prepared formulation *Arka Taila Malahara* was modified formulation which was prepared easily and convenient for the application. *Taila* being liquid becomes more susceptible to seasonal variation whereas *Malahara* remains semisolid in all the seasons.

Hence *Malahara* remains to be stable having soft and smooth consistency for the longer period of time. This implies that *Malahara* was most acceptable form of preparation as compared to *Taila* preparation. Thus an attempt was made to modify *Arka Taila* into *Arka Taila Malahara*.

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**Conflict of Interest** – Financial Declared; others- None

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