



Standard Operating Procedure (SOP) for Preparation of *Arka Taila*: An Ayurvedic Oil Based Medicine

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Abstract

Shaalaakya Tantra, one among the eight branches of *Aayurveda*, deals with the precious supra clavicular organs, Head and Neck, the diseases affecting them and their management. *Sneha Kalpana* is a process to get the oleaginous medicinal substances. *Karnasraava* is a disease mentioned by *Aachaarya Sushruta* in the chapter of *Karnaroga Vigyaaniya* among twenty eight *Karnarogas*. *Karnasraava* means discharge from ear which can be correlated with otorrhoea. *Arka Taila* has been mentioned in *Shaarangadhara*, *Bhaavaprakasha*, *Gadanigraha*, *Bangsen* etc. It is a very simple formula having ingredients i.e. *Haridra*, *Arka Patra Swarasa* and *Sarshapa Taila*, which are very cheap and easily available in their authentic form. Preparation of *Arka Taila* is very easy and cost effective. All the ingredients are having *Kanduhara* (antipruritus), *Vrana Ropana* (healing property), *Jantughna* (antibacterial) properties.

Keywords

Arkataila, *Standard Operating Procedure (SOP)*, *Karnasraava*



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INTRODUCTION

Sneha Kalpanaa is a process to get the oleaginous medicinal substances. *Taila Kalpanaa* is a technique where *Taila* is used as a base to get properties of the herbs in the media of *Sarshapa Taila*. The *Taila* acts not only as base but also vehicle. The active constituents of the drugs are incorporated into the *Taila* to make the preparation therapeutically more potent.

*Arka Taila*¹ consists of three drugs which are *Arka*, *Haridra* and *Sarshapa Taila*. *Arka Taila* was prepared by general method of preparation of *Taila Kalpanaa*² in the Department of Rasashashtra and Bhaishajya Kalpana I.P.G.T. & R.A., Jamnagar.

The proportion of all the ingredients is as follow,³

Table 1 Proportion of all the ingredients

Sr.No.	Ingredients	Quantity
1	<i>Haridra Kalka</i>	1/8 part
2	<i>Sarshapa Taila</i>	1 part
3	<i>Arka Patra</i> <i>Swarasa</i>	4 part

- **Sneha Dravya:** *Sarshapa Taila* (processed oil from seeds of *Brasica campestris*)
- **Drava Dravya:** *Arka Patra Swarasa* (juice obtained from macerated leaves of *Calotropis procera*)

- **Kalka Dravya:** A fine paste obtained from fresh *Haridra kanda* (rhizome of *Curcuma longa*)

AYURVEDIC PROPERTIES OF DRUGS OF ARKA TAILA:

1. ARKA

➤ **Botanical Name :** *Calotropis procera*

➤ **Natural Order :** Asclepiadaceae.

➤ **Classical Names :** *Arka*, *Raktaarka*, *Toolaphala*, *Ksirparna*, *Arkaparna*, *Vikirana*, *Asphota*.

➤ **English Name :** Madara.

➤ **Part Used :** Leaf.

➤ **AYURVEDIC PROPERTIES⁴ :**

- **Rasa :** *Katu*, *Tikta*; (**Flower**) *Tikta*, *Madhura*

- **Guna :** *Ruksha*, *Laghu*, *Tikshna*.

- **Veerya :** *Ushna*.

- **Vipaaka :** *Katu*

- **Doshagnataa :** *Kapha* - *Vaatashaamaka*.

- **Karma:** *Vedanaa* *Sthaapana*, *Shothahara*, *Vranashodhana*, *Jantughna*, *Vamanopaga*, *Deepana* (appetizer), *Paachana* (digestive), *Pittasaaraka*, *Rechana* (laxative), *Krimighna* (antihelminthic), *Amashayakshobhaka*, *Hridayottejaka*, *Raktasodhaka*.



- **Rogagnata** : *Shotha* (inflammation), *Vedanaa* (pain), *Shleepada* (filariasis), *Aamavaata* (Rhematoidarthritis), *Karnaroga* (ear disorders), *Vrana* (wounds), *Granthi*, *Khaalitya* (hair fall), *Charmaroga*, *Shwitra*, *Kushtha*, *Arsha* (piles), *Dantashula* (pain in teeth), *Agnimaandya* (anorexia), *Ajirna*, *Yakritvikaara* (liver disorders), *Vibandha* (constipation), *Gulma*, *Udararoga*, *Krimi* (worms), *Visuchika* (dysentery), *Upadansha*, *Hriddaurbalya*, *Raktavikaara*, *Kasa* (cough), *Shwaasa* (asthma) , *Jirnajwara*, (chronic fever), *Vishamajwara* (Malaria), *Sarpavisha*.

2. **HARIDRA**⁵

➤ **Botanical Name** : *Curcuma longa*.
Linn.

➤ **Natural Order** : Zingiberaceae

➤ **Classical Names** : *Rajani*, *Nishaa*, *Gauri*, *Krimighna*, *Yoshiatpriya*, *Kanchani*, *Hattavilaasini*

➤ **English Name** : Turmeric.

➤ **Part Used** : Rhizome.

➤ **AYURVEDIC PROPERTIES**⁶ :

- **Rasa** : *Tikta*, *Katu*.
- **Guna** : *Ruksha*, *Laghu*.
- **Veerya** : *Ushna*
- **Vipaaka** : *Katu*
- **Doshagnata** : *Tridoshashaamaka*.

- **Karma**: *Varnya* (good for wound), *Kusthaghna* (medicaments for skin disorders), *Raktaprasaadana*, *Raktavardhaka*, *Vranashodhana* (wound cleaner), *Vranaropana* (wound healer), *Hikkaanigrahana*, *Shwaasahara* (anti-asthematic), *Vishaghna* (antidot), *Anulomana* (carminative), *Pittarechaka*, *Ruchivardhaka*, *Krimighna* (antihelminthic), *Shothaghna* (anti-inflammatory), *Vedanaasthapana* (analgesic), *Jwaraghna* (antipyretic), *Mutrasangrahaniya*, *Mutravirajaniya*.

- **Rogagnataa** : *Shotha* (inflammation), *Vedanaa* (pain), *Vrana* (ulcer or wound), *Shwaasa* (asthama), *Aruchi* (anorexia), *Vibandha* (constipation), *Kaamala* (jaundice), *Jalodara* (asitice), *Krimi* (antihelminthic), *Paandu* (anaemia), *Kaasa* (cough), *Pratishyaaya* (rhinitis), *Shukrameha*, *Prameha* (diabetes mellitus), *Kandu* (pruritus), *Shitapitta* (urticaria), *Kushtha* (skin disorders).

3. **SARSHAPA**

➤ **Botanical Name** : *Brasica campestris*

➤ **Natural Order** : Cruciferae

➤ **Classical Names** : *Sarshapa*, *Siddhaartha*

➤ **English Name** : Mustard (Seed)



➤ **Part Used :** Seed (Oil)

AYURVEDIC PROPERTIES⁷ :

- **Rasa :** *Katu, Tikta.*
- **Guna :** *Tikshna, Snigdha*
- **Veerya :** *Ushna*
- **Vipaka :** *Katu*
- **Doshagnata :** *Kapha - Vaata Shaamaka*
- **Karma:** *Lekhana, Vidaahi, Agnideepana* (appetizer), *Vamanopaga* (emetic property), *Varnya, Raktapittavardhaka, Krimighna* (anthelmintic), *Jantughna, Dantapuyaghna* (tonic), *Kusthghna* (medicaments for skin disorders), *Shonitoklesha* (seed).
- **Rogagnata:** *Kustha* (skin disorders), *Plihavriddhi* (spleenomegali), *Krimiroga* (worms), *Rajorodha, Vishaghna* (antidot), *Udardaghna, Karnaroga* (ear diseases), *Vatavyadhi.*

Quality control of *Arka Taila* remains an unexplored issue despite of its increase in the popularity. Thus, in the present work an attempt has been made to use some newer approaches for the standardization of *Arka Taila* with following objectives:

AIMS AND OBJECTIVES

- To develop Standardized Operating Procedure (SOP) for the preparation of *Arka Taila*.

MATERIALS AND METHODS

Selection, processing and quality evaluation of the raw materials:

Fresh *Haridraa* was collected from the vegetable market of Jamnagar, *SarshapaTaila* was purchased from oil mill of Jamnagar and for *Swarasa*, fresh *Arka Patra* was collected from periphery of Jamnagar city. As identification of the raw materials used to prepare any finished product is a must, all ingredients procured through local market were authenticated by Department of Pharmacognosy, I.P.G.T. & R.A., Jamnagar.

Preparation of *Arka Taila*:⁸

The SOP for the preparation of *Arka Taila* involved following steps:

- *Pakva Arka Patra* was collected and washed thoroughly with water.
- It wiped out with cotton cloth and weight was measured which was 12 kgs.
- *Swarasa* was extracted from fresh *Arka Patra* by using mixture machine.
- Thus 8 liters of *Arka Patra Swarasa* was obtained.
- 500 gm fresh *Haridraa* was made into *Kalka* form by using mixture machine.
- 2 liters of *SarshapaTaila* was taken in a steel vessel and heated in *Madhyama Agni*



i.e. 100°C till complete evaporation of moisture contents.

- The *HaridraaKalka* was added to the *Taila* followed by addition of *Arka PatraSwarasa*. Heating was continued with continuous stirring of the mixture for 1 hr.
- Next day, heating was done at the temperature of 70°-90° C for the duration of five hours.
- On third day, heating was done for seven hours at the same temperature and *SiddhaKharapaaka Lakshana* like frothing of *Taila* and breaking down of *Kalka* into pieces on attempting to form a *Varti*.
- After self cooling filtering of the *Taila* with the dry clean cloth was done and *Taila* was collected measured which is of 1850 ml.
- Thus obtained *Taila* was stored in a clean and dry container.

OBSERVATIONS AND DISCUSSION

- Quality assurance is an integral part of all systems of medicine to ensure the quality medicament. Various multidisciplinary and - analytical approaches such as development of SOP, preliminary phytochemical and physicochemical evaluation, chromatographic evaluation etc., have been

employed and reported for the scientific evaluation of various traditional



FIG-1.1



FIG-1.2



FIG-1.3



FIG-1.4



FIG-1.5



FIG-1.6



FIG-1.7



FIG-1.8

formulations. In the present research work, Standard Operating Procedure (SOP) was developed for preparation of *Arka Taila*.



While preparation of *Arka Taila*, it was closely observed till the achievement of desired *Sneha Siddhi Lakshana acc. to Ayurveda*. Some of the key observation were done during the preparation of *Arka Taila* as follows,

1. It is better to use fresh leaves of *Arka* (*Calotropis procera*) because it contains more juice than old one.
2. The whole mixture was heated on moderate fire. (*Madhyamagni*) the benefit of this step is that it can prevent deterioration of active principles within the medicines.
3. If the *Taila*, is prepared according to given classical methods in *Ayurveda*, it was observed in analysis that no microbial contamination found.
4. The method of manufacturing of *Arka Taila* is very easy and can be implemented for larger scale production.

CONCLUSION

It can be concluded that by developing standard operating procedure (SOP) for preparation of *Arka Taila* will help for larger scale manufacturing as well as can help to prevent batch to batch variation. As *Arka Taila* contains a wide range of phytochemical components, it is needed to

validate its therapeutic utility through preclinical and clinical studies also.



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]IrmkRSy तिक्तोष्णं स्निग्धं सलवणं लघु।
कुष्ठगुल्मोदरहरं श्रेष्ठमेतद् विरेचनम् ॥ यभा ॥ प्र ॥फ
अर्कस्तिक्तो भवेदुष्णः शोधन परमः स्मृतः।
कण्डूव्रणहरो हन्ति जन्तुसन्ततिमुद्रताम् ॥ यध ॥
नि ॥फ

अर्कस्तु कटुरुष्णश्च वातजिदीपनीयकः । शोथव्रणहरः
कण्डूकुष्ठकृमिविनाशनः ॥ यरा ॥ नि ॥फ
५ ॥ व्द ॥ मुकुन्द सवनसि य२००६फ । च्हेमसितरय
नद पहारमाचखलखगय खड अयुरवेदचि मेदचिनाल
पलानतस ॥
६ ॥ हरिद्रा तु रसे तिक्ता रुक्षोष्णा विषकुष्ठनुत्।
मेहकण्डूव्रणान् हन्ति देहवर्णाविधायिनी ।
विशोधनी कृमिहरा पीनसारुचिनाशिनी ॥ य ध ॥
नि ॥फ
हरिद्रा कटुका तिक्ता रुक्षोष्णा कफपित्तनुत्। वण्यार्
त्वदोषमेहास्रशोषपाण्डुव्रणापहा ॥ यभा ॥ प्र ॥फ
हरिद्रा प्रमेहहराणाम्। यअ ॥ सं ॥ सू ॥४०फ
७ ॥ सर्षपस्तु रसे पाके कटुः स्निग्धः सतिक्तकः।
तिक्तोष्णः कफवातघ्नो रक्तपित्ताभिवर्धनः।
रक्षोहरो जयेत् कण्डूकुष्ठकोष्ठकृमिग्रहान्। यथा
रक्तस्तथा गौरः किन्तु गौरो वरो मतः ॥ यभा ॥
प्र ॥फ



कटुपाकमचक्षुष्यं स्निग्धोष्णं बहुपित्तलम्। कृमिघ्नं

सार्षपं तैलं कण्डूकुष्ठापहं लघुः॥ चसु॥ सू॥

४५११७फ

कटुतैलोपदेशं तु वक्ष्यामि प्लीहनाशनम्। नालः

परतरं किञ्चिदौषधं प्लीहशान्तये॥ चकाश्यप

संहिताफ

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