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## Analytical Profile Of *Dashmoola Taila* In Indian Traditional Knowledge.

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### ABSTRACT

In *Ayurveda*, medicated oils are preferably used in diseases which are due to the *Vata Dosh Dushti*. *Dashmoola Taila* is an *Ayurvedic* formulation mentioned in *Bheshajya-ratnavali* in the management of *Shiro-roga* (Disease of Head). The main contents of *Dashmool taila* are *Aegle marmelos* L., *Premna mucronata* Roxb., *Oroxylum indicum* Vent., *Stereospermum suaveolens* Roxb., *Gmelina arborea* Roxb., *Desmodium gangeticum* (L.) DC., *Uraria Picta* Jacq., *Solanum indicum* Linn, *Solanum surattense* Burm. f., *Tribulus terrestris* L., *Vitex negundo* Linn. and *Brassica comprestis* L. It contains predominantly *Tridoshashamak Dravya*. It is prepared by classical method of *Taila-paka Kalpana* (oil preparation) mentioned in classical text of *Ayurvedic* pharmaceuticals and standard operative procedure described in *Ayurvedic pharmacopoeia* of India.

**Keywords:** *Dashmoola, Taila, Shiro-roga, TLC, Tailapaka, Kwatha.*

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## INTRODUCTION

*Ayurveda* is the integral and the most ancient form of medical stream related to the wholesome cure of ailments by the natural remedies in the form of both herbal formulations and purificationary procedures. In *Ayurveda* a person is known healthy his/her all *Dosha* (physiological regulatory entities), *Dhatu* (structural entities), *Malas* (excretory entities) all are in normal state [1].

*Dashmoola taila* is an Ayurvedic medicated preparation which is mentioned for *Nasya* (Administration of medicament through nostrils) therapy in *Shiro-roga*[1][2] is one among *Shiro-roga* described by various *Acharyas*. The sign and symptoms of *Ardhambhedaka* have can be correlated with migraine. *Taila* is a medicated formulation of various *Doshshamak* (Bodily humor balancing) drugs according to respective diseases which alleviates *Vatadosha* does not aggravate *Kapha*[3]. During the *Snehpaka* (medicated oil formulation) procedure *Taila* have a specific property to assimilate the properties of added drugs and maintains its own properties.[4]. In present study *Dashmoola Taila* is taken for the management of *Ardhambhedaka* because of its contents which are predominantly *Tridoshamaka*.

**Table 1: Composition of *Dashmoola Taila***

Name of ingredients			Part used	Quantity
Sanskrit	English	Botanical		
Bilwa	Stone apple	<i>Aegle marmelos</i> L.	Root	50 gm
Agnimantha	Dusky Fire Brand Bark	<i>Premna mucronata</i> Roxb.	Root	50 gm
Shayonak	Indian trumpet tree	<i>Oroxylum indicum</i> Vent.	Root	50 gm
Patala	Trumpet	<i>Stereospermum suaveolens</i> Roxb.	Root	50 gm
Gambhari	Coomb teak	<i>Gmelina arborea</i> Roxb.	Root	50 gm
Shalparni	Sal leaved Desmodium	<i>Desmodium gangeticum</i> (L.) DC.	Root	50 gm
Prashnaparni	Slight-of-hand	<i>Uraria Picta</i> Jacq.	Root	50 gm
Brahati	African egg plant	<i>Solanum indicum</i> Linn	Root	50 gm
Kantakari	Yellow - Berried Nightshade	<i>Solanum surattense</i> Burm. f.	Root	50 gm
Gokshur	Puncture Vine	<i>Tribulus terrestris</i> L.	Root	50 gm
Nirgundi	Five-leaved chaste tree	<i>Vitex negundo</i> Linn.	Leaves	500 gm
Sarshap	Field mustard	<i>Brassica comprestis</i> L.	Root	2 Liter

## MATERIAL AND METHODS

### Collection of Raw Materials

The raw drugs for the study were procured from the Herbal Automation, Kankhal Haridwar, Uttarakhand. The final product that is *DashmoolaTaila* [1] was prepared in Anamika pharmacy, Sidcul, Haridwar, Uttarakhand. The ingredients were identified by PG Department of *Dravyaguna*, Rishikul campus, Haridwar.

### Method of Preparation of *Dashmoola Taila*

The *Dashmoola Taila* was prepared by classical method of *Tailapaka*. Ingredients of *Dashmoola Taila*, which is mentioned in Table No 1. 50 gm of top ten herbs in are coarsely powdered and pass through sieve no 44.

- *Sarshap Taila* (Mustard Oil) : 2 Liters
- Paste of Nirguni : 500 gms
- Water : 8 litres

After this the coarse powder was soaked in 4 times water overnight and boiled in 8 liters water and reduced up to ¼ i.e., 2 liters. This is called *Kwatha* (Decoction). *Sarshapa Taila* was taken in a medium-sized stainless steel vessel and heated on mild flame. When the *Taila* heated then Nirgundi Kalka was added. After pouring *Kalka dravya* and water, heating was continued on mild flame with continuous stirring, till water evaporated completely and only oil left. Heating was stopped when it acquires the

shape and consistency of *Varti* (cotton wick) was formed. *Varti* was tested for absence of crackling sound during burning over the flame. *Taila* was filtered while hot through a muslin cloth and allowed to cool. After that, the *Taila* was packed tightly.



*Premna mucronata* Roxb., *Gmelina arborea* Roxb., *Vitex negundo* Linn

**Figure 1: Drug used in Dashmoola Kwatha Preparation and Nirgundi kwatha.**

### The Ayurvedic Pharmacodynamics of *Dashmoola kwath*

The mode of action of a drug and its physiological effect can be best understood by the properties of its basic physiochemical factors i.e. *Rasa*, *Guna*, *Veerya*, *Vipaka*, *Karma* and *Prabhava* of the drugs. These properties affect the *Doshas* and determine their *Doshkarma* activity which in turn corrects the vitiated *Doshas* and maintain the *Doshika* equilibrium of the body.

**Analytical Study:** value of all the physiochemical method is mentioned as, mentioned in the API and all the protocol developed by the PLI, Ghaziabad [6][7]

**Organoleptic Study:** Organoleptic characteristics for various sensory characters like colour, taste, odouretc and was carefully noted down as mentioned in Table no.1.

**Table 2: Organoleptic parameters of *Dashmoola Taila***

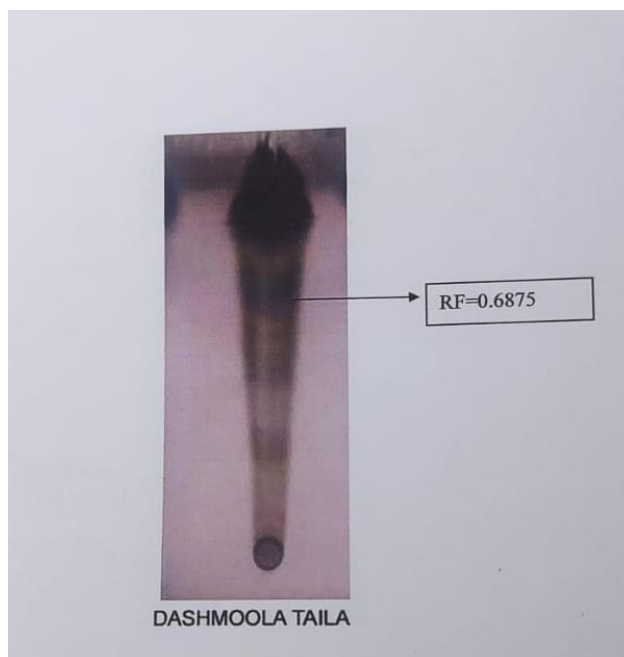
Properties Parameters	Colour	Taste	Odour	Touch	Appearance
<b>Judgment</b>	Light Yellow	Bitter	Oily	Greasy	Oily Liquid

**Physiochemical Analysis:** Physiochemical analysis such as Acid value (AV), Peroxide value (PV), Saponification value (SV), Iodine value (IV), Refractive index (RI) and weight per ml at 40 °C tests were carried out as mentioned in Table No 2.

**Table 3: Physio – chemical parameters of analysis**

Parameters	RI	Wt/ml	AV	PV	SV	IV
Values	1.663	0.9104	2.98	2.63	181.25	113.39

**Chromatography (TLC) Study:** TLC Profile Instrument used was Silica plate. The stationary phase used was TLC plate's silica gel F254 and mobile phase was Toluene: Ethyl acetate (90:10). The plate was sprayed with vanillin sulphuric acid reagent and the spots were detected after heating at 105°C for 10 min. Rf value of each spot was recorded. TLC chromatograph is shown in fig No. 2.



**Figure 2: TLC Chromatogram of Dasmoola Taila**

**Heavy Metal Analysis:** Heavy metal analysis reveals Lead, Cadmium, Arsenic, Mercury as mentioned in Table no.3.

**Table No. 4: Heavy metal analysis**

Heavy Metals	Lead	Cadmium	Arsenic	Mercury
Values	2.36	0.02	<0.50	0.29

**Microbiological Limit Test:** Microbial load estimation shows total bacterial count and total Yeast and mould count. Test for another specific pathogen is negative defined in Table no.4.

**Thin Layer Chromatography (TLC):** Thin layer chromatography study (TLC) was carried out under 254 and 366 nm UV to establish a fingerprint profile. It showed Rf values 0.6875, which may be responsible for the expression of its pharmacological and clinical actions.

**Table 4: Microbial Load Estimation of Formulated Dasmoola Taila**

Parameters	Total bacterial count (cfu/g)	Total Yeast and Mould count (cfu/g)	<i>E. coli</i>	<i>Salmonella</i> SP	<i>Pseudomonas aeruginosa</i>	<i>Staphylococcus aureus</i>
Observation	<10	<10	Absent	Absent	Absent	Absent

## DISCUSSION

*Dashmoola Taila* is mentioned in *Bheshajya Ratnavali* in *Shiro-roga* for *Nasya* therapy but standard operative procedure (SOP) and analytical parameters of *Dashmoola Taila* preparation is not available so far. For optimum therapeutic efficacy *Dashmoola Taila* was prepared as per the general guidelines and procedure of *Tailapaka* in the Ayurvedic Pharmacopoeia of India and maintained in all processes till the manufacturing and packed in 15ml bottles in sterile environment. *Dashmoola Taila* is prepared by *Sarshapa Taila* and Ayurvedic pharmacodynamic property of the drugs used in *Dashmoola Taila* of *Dashmoola* and *Nirgundi* which are predominantly *Tridoshamak*. Thus, the prepared oil will also be predominantly *Tridoshamak*. The obtained values of all tests are found within normal limits which indicate good quality of prepared oil.

## CONCLUSION

*Dashmoola Taila* is a polyherbal formulation contains the drug having properties such as *Tridoshamaka*, *Sirah-shoolanashaka* and oil nourishes the nerves, gives mental and physical strength. Physical test indicates *Dashmoola Taila* is light yellow in colour with bitter taste and have characteristic aroma. Quantitative chemical analysis shows that in *Dashmoola Taila*, Refractive index-1.663, Acid value-2.98, Peroxide value- 2.63, Saponification value- 181.25, Iodine value- 113.39. Pharmaceutical and analytical results with TLC fingerprint are essential parameter for quality and efficacy of prepared oil. The results of physical characters such as, heavy metals. and microbial limit were found within normal limits showed that prepared oil is physically and chemically stable. TLC finger print and values of analytical will used as monograph of *Dashmoola Taila* in future.

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