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## Research Article

### PHARMACEUTICAL-ANALYTICAL STUDY OF VRANAMRITHA SHWETHA MALAHARA

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#### ABSTRACT

Background: Malahara is a recently introduced dosage form in Ayurvedic system of medicine. Vranamritha shwetha malahara is a unique herbo-mineral formulation comprising of Karpooora, Tankana, Siktha and Tila taila. It is indicated in Shuddha vrana (Fresh wound), Purana vrana (Chronic wound) and Agni Dagdha vrana (Burn wound). Aim: To develop preliminary standards for Vranamritha shwetha malahara. Materials and methods: Karpooora, Siktha, Tila taila and Shuddha Tankana were taken in mentioned quantity and Vranamritha shwetha malahara was prepared. The prepared malahara was subjected to organoleptic and physico-chemical parameters. Observations and results: The results of organoleptic characters like appearance, odour, taste and physico-chemical parameters like pH and loss on drying were carried out. Discussion and conclusion: Vranamritha shwetha malahara is indicated in Vrana. It helps in filling up the fresh wounds (Shuddha vrana), helps in removing the secretions from chronic wounds (Purana vrana) and helps in burn wounds (Agni Dagdha vrana) by giving cooling effect.

**Keywords:** Ayurveda, Malahara, Kalpana, Vranamritha shwetha malahara, Vrana.

#### INTRODUCTION

Ayurveda has specified two types of Chikitsa- Abhyantara chikitsa and Bahya chikitsa. Malahara kalpana comes under Bahya chikitsa<sup>1</sup>. It is a unique dosage form with many advantages. The term malahara is derived from the root word 'malham' or 'marham' adopted from Unani system of medicine. The term Malahara was first adapted into Ayurveda by Yogaratnakara, meaning, "That which removes mala (residue or toxin) from Vrana, Vidradi, Twak vikara, etc. conditions"<sup>2</sup>. Depending on the drugs used in the preparation, it has various properties like Snehana (oleation), Lekhana (scraping), Ropana (healing) and Varnya (beautifying), which expands its range of utility<sup>3</sup>. The base material of malahara kalpana can be Taila, Ghrita, Siktha, Sarjarasa, etc. It is a simple pharmaceutical preparation prepared as follows: the base material made warm and filtered, then added with powdered medicinal drugs and stirred well until it attains a thick homogenous mixture<sup>4</sup>.

Wound is defined as "destruction/break/rupture/discontinuity in the skin or other body tissues caused by injury or surgical incision", and is a reason at present to visit hospitals. There are two types of wounds- Acute wound (Shuddha vrana) and Chronic wound (Purana/Dushta vrana)<sup>5</sup>. Acharya Sushruta has given importance for the treatment of vrana. Treatises like Ashtanga Hridaya and Ashtanga Sangraha have also emphasized on the treatment of vrana.

Vranamritha shwetha malahara is a preparation comprising of Karpooora, Tankana, Siktha and Tila taila. It is beneficial in Shuddha vrana, Purana vrana and Agni Dagdha vrana<sup>6</sup>. In this present study, method of preparation and physicochemical and

analytical parameters of Vranamritha shwetha malahara were analyzed.

#### MATERIALS AND METHODS

##### Collection of raw materials

Raw materials required for Vranamritha shwetha malahara were procured from Department of Rasashastra and Bhaishajya kalpana, SDMCAH, Hassan, Karnataka. (Figures 1-4)

##### A. Pharmaceutical study

Vranamritha shwetha malahara was prepared in the practical laboratory, Department of Rasashastra and Bhaishajya kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan, Karnataka. (Figures 5-9)

##### Shodhana of Tankana

Tankana was taken in specified quantity and was powdered. Later, it was taken in a clean pan, fried until it puffed up<sup>11</sup>.

##### Preparation of Vranamritha shwetha malahara<sup>6</sup>

The ingredients namely Karpooora, Siktha, Tila taila and Shuddha Tankana were taken in mentioned quantity. (Table 2)

In a clean pan, Tila taila was taken and heated. Later added with bee wax and filtered into a clean khalwa through a cloth. To this filtered taila, the fine powders of Shuddha Tankana and Karpooora were added and stirred well until a thick homogenous mixture was obtained. (Figures 5-9)

##### B. Analytical study

Analytical study was carried out in the Quality Control Lab of Teaching Pharmacy, SDMCAH, Hassan.

The organoleptic characters like colour, odour, touch and physicochemical parameters like pH, loss on drying were carried out (Tables 3 and 4).

**Determination of pH<sup>12</sup>**

The pH of an aqueous liquid may be defined as, the common logarithm of the reciprocal of the hydrogen ion concentration expressed in grams per liter. The pH value of a solution can be measured using two electrodes. The pH meter was calibrated to 4, 7 and 9 by using buffer solution. 1g of prepared Vranamritha

shwetha malahara was dissolved in 10ml of distilled water and this solution was taken in glass beaker. The electrode of the pH meter was dipped into the solution and the reading was noted.

**Loss on drying<sup>13</sup>**

A sample of 10g of the prepared Vranamritha shwetha malahara taken in a tarred evaporating dish, dried at 105°C for five hours and weighed. The process of drying and weighing was continued at one-hour interval until the difference between two successive weighs corresponded to not more than 0.25%.

**Table 1: Ingredients of Vranamritha Shwetha malahara and their properties<sup>7-10</sup>**

Sl. No.	Ingredients	Properties	Veerya (Potency)	Effect on dosha	Effect on vrana
1.	Karpoora ( <i>Cinnamomum camphora</i> )	Laghu (Light), Lekhana (Scraping action)	Sheetha (Cold)	Pacifies Kapha and Pitta	Vedanasthapana (Analgesic)
2.	Siktha ( <i>Cera alba</i> )	Mridu (Soft), Snigdha (Unctuous),	Ushna (Hot)	Pacifies Vata	Vrana-ropana (Wound healing)
3.	Tila taila ( <i>Sesamum indicum L.</i> )	Lekhana (Scraping action), Snigdha (Unctuous), Hima sparsha (Cold on touch)	Ushna (Hot)	Pacifies Vata and Kapha	Agni-dagdh vana (Burn wounds), Vrana shodhana (Wound cleansing), Vrana ropana (Wound healing)
4.	Shuddha Tankana ( <i>Sodium tetra borate</i> )	Ruksha (dry), Teekshna (sharp), Lekhana (Scraping action)	Ushna (Hot)	Scrapes off Kapha	Vividha vana-nashana (Different types of wounds)

**Table 2: Ingredients of Vranamritha shwetha malahara and its quantity**

Sl. No	Ingredients	Part used	Quantity taken in preparation
1	Karpoora (Camphor)	-	1gram
2	Siktha (Bee wax)	Wax	5gram
3	Tila taila (Sesame oil)	Oil	10gram
4	Shuddha Tankana (borax)	Mineral	10gram

**Table 3: Organoleptic characters**

Organoleptic characters	Vranamritha shwetha malahara
Color	Pale white
Odor	Characteristic karpoora smell
Touch	Smooth

**Table 4: Physicochemical characters**

Physicochemical characters	Vranamritha shwetha malahara
pH	8.48
Loss on drying	7.6%



Figure 1 Karpoora



Figure 2 Siktha

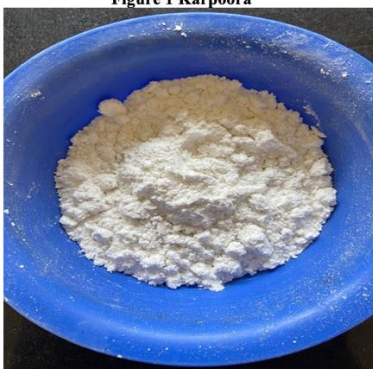


Figure 3 Shuddha Tankana



Figure 4 Tila taila



Figure 5 Tila taila in pan



Figure 6 Adding Siktha



Figure 7 Filtering Siktha taila

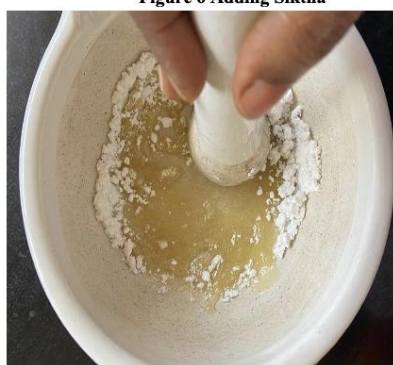


Figure 8 Mixing in a khalwa yantra.



Figure 9 Adding Karpooora

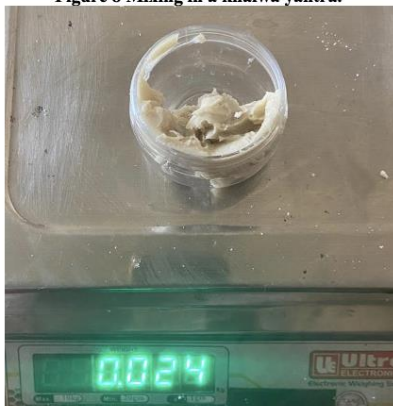


Figure 10 Yield obtained.

## OBSERVATIONS AND RESULTS

### Pharmaceutical observations

During the preparation of Vranamritha shwetha malahara, beeswax was melted in hot tila taila and filtered. After cooling, the fine powders of Shuddha Tankana and Karpooora were added and mixed well. Total duration of heating and mixing was 2 minutes and 5-6 minutes respectively. The color of prepared Vranamritha shwetha malahara was pale white and had a characteristic pleasant Karpooora odor.

Results of organoleptic & physico-chemical parameters are tabulated in **Table 3** and **Table 4**.

## DISCUSSION

Vranamritha shwetha malahara is a unique herbo-mineral preparation prepared by using Shuddha Tankana, Karpooora, Bees wax and Tila taila as the base. Initially, Siktha taila was prepared in the ratio 1:2 as told in the formulation. It was filtered through a clean cloth to remove physical impurities. Later Shuddha

Tankana and Karpooora were added and mixed well until thick homogenous content was obtained. Karpooora was added at the end, as it is volatile in nature. It was having pale white in color and a pleasant Karpooora odor. The pH of the malahara was 6.8, which suggest it is near to neutral. Therefore, it is less likely to cause irritation when applied on skin. Loss on drying is 7.6% suggesting the presence of little moisture. This was because Shuddha Tankana when exposed to air absorbs moisture and Karpooora is a volatile drug, which could have evaporated partially. The consistency of the Malahara was sticky and smooth, which was appropriate for application. Total weight of the ingredients taken was 26g and the yield obtained was 24g (Figure 10). The loss may be due to presence of impurities in Siktha and adherence some quantity of malahara in the khalwa yantra.

Vranamritha shwetha malahara is indicated in Shuddha vrana, Purana/Dushta vrana and Dagdha vrana. It helps in filling up the fresh wounds (Shuddha vrana), helps in removing the secretions from chronic wounds (Purana vrana) and helps in burn wounds (Agni Dagdha vrana) by giving cooling effect. Tankana being a kshara dravya helps in bringing about scraping action in dushta

vra. Siktha (Madhucchishta), known for its wound healing property will add on to malahara.

## CONCLUSION

Malahara is a recently added dosage form into Ayurvedic system of medicine. Vranamritha shwetha malahara is a combination of herbal and mineral drugs, which comprises of Karpoora, Siktha, Tila taila and Shuddha Tankana. It is indicated in Shuddha vra, Purana vra and Agni Dagdha vra. The organoleptic characteristics and physico-chemical characteristics suggest that the malahara can be beneficial in vra. This formulation is simple in preparation but not into clinical practice at present. Further clinical studies on its efficacy and more research will bring the formulation into practice.

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