WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.453
Volume 13, Issue 12, 989-994. Research Article ISSN 2277–7105

PHARMACEUTICAL AND ANALYTICAL STUDY OF HINGULADHYA MALAHARA

Prakruthi T. S.[1*], Gazala Hussain[2], Gayathri Sajeev[3], Anusha K. R.[4] and Pallavi K. B.[5]

[1,3,4]PG Scholar, Department of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan.

[2]Associate Professor, Department of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara college of Ayurveda and Hospital, Hassan.

[5]Assistant Professor, Department of Rasashastra and Bhaishajya Kalpana, Achutha Ayurveda Medical College Hospital and Research Center, Bengaluru.

Article Received on
02 May 2024,

Revised on 23 May 2024,
Accepted on 12 June 2024

DOI: 10.20959/wjpr202412-32865

***Corresponding Author**
Prakruthi T. S.
PG Scholar, Department of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara college of Ayurveda and Hospital, Hassan.

ABSTRACT

Introduction: Malahara which comes under Bahya Kalpana was introduced to Ayurveda pharmaceutics by 'Yogaratnakara'. Hinguladya malahara is one such herbo-mineral formulation indicated in phiranga vrana (Syphilis). In this study an effort was made to prepare hinguladhya malahara and to perform preliminary analytical tests. **Materials and Methods:** The methodology of this work was divided into pharmaceutical and analytical study. Hingula shodhana was done with nimbu swarasa by bhavana. Siktha taila was prepared in the ratio of 1:5. Malahara was prepared using siktha taila, shodhita hingula (Cinnabar) and girisindura (Mercuric oxide). The preliminary analytical data were documented. **Results and Discussion:** The yield of hinguladhya malahara was 71g and it was pinkish red in colour. The loss on drying was 0.43% which shows the presence of less moisture and volatile content. **Conclusion:** Hinguladhya malahara is a simple formulation indicated in phiranga vrana, which is easy to prepare and economical. This study can be taken as preliminary standardization of hinguladhya malahara.

KEYWORDS: Malahara, Shodhana, Sikta taila, Phiranga vrana.

INTRODUCTION

Malahara which comes under Bahya Kalpana (external application) was introduced to Ayurveda pharmaceutics by 'Yogaratnakara'. The term Malahara has originated from the word malaham or marham from Unani system of medicine. Malahara means removing of impurities. Mainly malahara are indicated in skin disorders and vrana.

Hinguladya malahara is one such formulation mentioned in Rasa Tarangini containing Hingula (Cinnabar), Girisindura (Mercuric oxide) and siktha taila.[1] It is indicated in the treatment of phiranga vrana (Syphilis). In this study an effort was made to prepare hinguladhya malahara and to perform preliminary analytical tests.

OBJECTIVES

To prepare and analyze Hinguladhya malahara.

MATERIALS AND METHODS: The materials and methods of this work can be classified into following section.

1. Pharmaceutical study
2. Analytical study

Pharmaceutical study

Collection of raw materials

Raw materials were collected from Department of Rasashastra and Bhaishajya Kalpana, Sri Dharmasthala Manjunatheshwara College of Ayurveda and Hospital, Hassan.

Before the actual preparation of Hinguladhya malahara, shodhana of Hingula was done.

Hingula shodhana[2]

Fine powder of hingula was taken in a khalva yantra (Morter and pestle) and bhavana (Levigation) was done with nimbu swarasa for 7 times. After subhavitha lakshana (Test for perfectness) are attained, hingula was washed with warm water and dried in sun.

Preparation of Hinguladhya malahara

Siktha taila was prepared using madhuchista (Bee wax) and tila taila (Sesame oil) in the ratio of 1:5.[3] The vessel containing tila taila was heated in medium flame on stove. Once fumes appeared madhuchista was added and stirred. The prepared siktha taila was filtered to khalva yantra then Shuddha hingula and girisindura were added and stirred continuously with peshani (pestle) to form homogeneous mixture.

Table 1: Drugs and quantity.

Sl.no	Drug	Proportion	Quantity
1	Tila Taila	20 parts	60g
2	Madhuchista	4 parts	12g
3	Shuddha Hingula	1 part	3g
4	Girisindura	1 part	3g
Total quantity taken			78g

Fig.1 Sikta (Bee wax).

Fig.2 Tila taila (Sesame oil).

Fig.3 Hingula (Cinnabar).

Fig.4 Girisindura (Mercuric oxide).

Fig.5 Mixing of ingredients.

Fig.6 Hinguladhya malahara.

Analytical study

The analytical study was done to assess the standard parameters mentioned for the formulation as per guidelines of CCRAS.[4]

A) Organoleptic characters - colour, consistency and odour.

B) Physical and chemical parameters– pH, loss on drying and spreadability.

Determination of pH

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 meter was used which consists of a voltmeter connected with two electrodes i.e., standard electrode and special electrode. The pH meter was calibrated using 7 and 4 buffer solution. Hinguladya malahara was taken and the electrodes of the pH meter were dipped into the sample and reading was noted.

To check pH for semisolids it is advised to use the sample as it is without diluting. So, electrodes where directly dipped in the sample.

Loss on drying

10gm of accurately weighed Hinguladya malahara was taken in a tarred evaporating dish then dried at 105ºC 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% or 0.001g. Percentage loss was calculated by obtaining ratio of difference of initial weight and final weight to initial weight of the sample.

Spreadability test[5]

1gm of accurately weighed Hinguladya malahara was placed on a glass slide which is adhered to the wooden board, other glass slide of same length was kept over that and 100gm of weight was applied on the glass slide for 5min to spread sample into uniform thickness. Weight of 50gm was added to the pan. The time taken by the slides to separate was noted.

$$S = m \times l/t$$

Where: m- weight tied on upper slide

l- length of glass slide

t- time in s.

OBSERVATION AND RESULTS

Pharmaceutical study

At first Hingula shodhana was tried with less quantity. It was observed that obtaining of dry powder of hingula was very difficult. The luster of hingula was reduced after shodhana. Hingula was getting sedimented at the bottom when it was mixed with siktha taila, so continuous stirring was done.

Table 2: Observations during Preparation.

Particulars	Classical ratio
Quantity taken	78g
Quantity obtained	71g
Total loss during procedure	07g
Percentage loss	8.97%

Analytical Study

Table 3: Organoleptic Characters.

Parameter	Results
Colour	Pinkish red
Consistency	Semi solid
Odour	Characteristic

Table 4: Physical and chemical parameter.

Parameter	Results
pH	9.08
Loss on drying	0.43%
Spreadability	1.91 (g Cm s^{-1})

DISCUSSION

After shodhana, hingula lost its luster may be due to the action of acid content in Nimbu swarasa. Citric acid even helps in loosening the bond and removing the impurities. Dry hingula powder was obtained easily when more quantity was taken for shodhana when compared with lesser quantity. Hingula should be washed with warm water and dried after shodhana to remove the amlatha of nimbu swarasa. During preparation of malahara it is told to stir continuously while mixing shoditha hingula to avoid sedimentation of hingula due its heavy weight.

pH was measured by directly dipping electrode into sample because it is difficult to obtain 10% aqueous solution when there is oil and wax present. The loss on drying of hinguladhya malahara was 0.43% may be due to less moisture and volatile contents. Spreadability is

dependent on the sample's transit speed in addition to its distance travelled. Spreadability of hinguladhya malahara could be interpreted as difficult to spread because it took 6min 53sec to travel 15cm length.

CONCLUSION

Hinguladhya malahara is a simple formulation indicated in phiranga vrana, which is easy to prepare and economical, comprising only sesame oil, bee wax and two mineral ingredients. The analytical study conducted can be considered as preliminary data for standardization of the formulation. The further experimental evaluation will be pivotal in determining its clinical efficacy.

REFERENCE

1. Shastri K. Rasa Tarangini of Sadanandasharma. 11th ed., Varanasi; Mothilal banarasidas, 2004; 203.
2. Shastri K. Rasa Tarangini of Sadanandasharma. 11th ed., Varanasi; Mothilal banarasidas, 2004; 202.
3. Shastri K. Rasa Tarangini of Sadanandasharma. 11th ed., Varanasi; Mothilal banarasidas, 2004; 115.
4. Anonymous. Laboratory guide for the analysis of Ayurveda and Siddha formulations. New Delhi; CCRAS, Department of AYUSH, Ministry of Health and Family Welfare, Government of India, 2010; 9.
5. Sabale V, Kunjwani H, Sabale P. Formulation and in vitro evaluation of the topical antiageing preparation of the fruit of Benincasa hispida. Journal of Ayurveda and integrative medicine, 2011 Jul; 2(3): 124.