



PHARMACEUTICAL STUDY OF SUVARNAGAIRIKA W.S.R. TO ITS SHODHANA

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ABSTRACT

Introduction: Ayurveda is a highly evolved and codified system of life and health science based on its own unique and original concept and fundamental principles. Rasashastra is a science of Ayurvedic pharmaceuticals which deals with the drugs of mineral origin, their varieties, characteristics, processing techniques, properties and therapeutic uses. The Shodhana process is aimed to remove harmful substances / impurities present in the drugs. By the application of various Shodhana processes prescribed in Rasa classics various physical and chemical changes takes place in the purified drug, which will be analyzed by applying some modern analytical test parameters. **Materials and methods:** In the present study Suvarnagairika was purified with two different methods i.e. Goghruata Bharjana and Godugdha Bhavana method and observations were documented. **Results:** Organoleptic characters didn't show any variation in both samples but final yield in method 2 (Godugdha Bhavana) observed more than method 1(Goghruata Bharjana). **Discussion and Conclusion:** Suvarnagairika shodhana was done by following the method prescribed in Ayurved prakash and Rasaratna samucchaya and observations during Shodhana and after Shodhana was documented. A detailed work is discussed in article.

KEYWORDS: Suvarnagairika, Shodhana, pharmaceutical study etc.

INTRODUCTION

Pharmaceutical study is the study of drug manufacturing. As like healing drug manufacturing too is an art. Ayurveda has rightly identified the importance of pharmacon- drug and placed it at second position after physician.^[1] In treating an ailment the first and foremost thing is preparation of the drug should be proper.

The process of eliminating the impurities of the metallic substances by means of Swedana, Mardana, Prakshalana, Nirvapana, Bhavana, Bharjana etc. specific process and techniques with the help of specifically mentioned Aushadha dravya (plant juice or animal product), is known as Shodhana.^[2]

In Rasashastra almost all the drugs right from mercury to poisonous herbal drugs are advised to be processed with specific Shodhana methods before their internal uses. Hence the Shodhana process is aimed to remove harmful substances / impurities present in the drugs. By the application of various Shodhana processes prescribed in Rasa classics various physical and chemical changes takes place in the purified drug.

Bhavana is a unique pharmaceutical process in which a drug or mixture of drugs in powdered form is triturated with sufficient quantity of liquid media till liquid portion gets absorbed completely.^[3]

The repeated Bhavana and puta paka treatments helps in the conversion of the finest particles and into desired chemical compound formation which when used internally could be absorbed into the system easily and produce their desired therapeutic effects.

Hence the present study is planned to purify raw Suvarnagairika with two different methods which is mentioned in classical texts and to see the changes during process and after process of Shodhana.

OBJECTIVES OF THE STUDY

- 1] To validate the standard method of Shodhana of Suvarnagairika.
- 2] To find out difficulties during Shodhana.
- 3] To know difference in two methods of Shodhana of Suvarnagairika at pharmaceutical grounds.

MATERIALS AND METHODS

The raw materials i.e. Suvarnagairika was procured from S.G. Phytopharma pharmacy, Kolhapur except Cow milk and Cow Ghruta, which were procured from local market.

Pharmaceutical processes carried out during the study were as follows.

- Shodhana of Suvarnagairika by Goghruata bharjana method.
- Shodhana of Suvarnagairika by Godugdha bhavana method.

Shodhana of Suvarnagairika by method I (Goghruata bharjana)(A.P. 2/272).

In this method Suvarnagairika Shodhana was done according to the reference of Ayurved prakash.^[4] In this method raw Suvarnagairika was first powdered with help of mortar and pestle. Then this powder shifted in pan, filled with 1/4th amount of Goghruata.^[5] and allow mild fire till it takes dark brick red color. Results of Goghruata shodhita Suvarnagairika documented in table 1.

Table 1: Showing Results of Goghruata Shodhita Suvarnagairika.

Sr.no.	Observations	Method I
1	Ashudha Suvarnagairika	100 g
2	Goghruata	25 g
3	Yield obtained	114
4	Net gain in yield	14 g
5	% gain in yield	12.2 %
6	Duration	30 min

Shodhana of Suvarnagairika by method II (Godugdha Bhavana)

In this method purification of Suvarnagairika was done following the reference from Rasa Ratna Sammucchaya.^[6] When any specification about duration of Bhavana, is not mentioned, then it should be carried out for seven times.^[7] In this method raw Suvarnagairika was triturated with cow milk for 7 times. After each trituration the material was dried in heavy sunlight. For each trituration fresh cow milk was taken.

Table 2: Showing results of Godugdha Shodhita Suvarnagairika.

Sr. no.	Bhavana	Quantity of Suvarnagairika (g)	Quantity of Godugdha (ml)	Obtained material (g)	Weight gain/loss (g)	% weight gain/loss	Duration
1	1 st	100	130	122	22	18	1 day
2	2 nd	122	80	120	-2	-1.6	1day
3	3 rd	120	50	124	4	3.2	1 day
4	4 th	124	50	135	11	8.1	1day
5	5 th	135	50	125	-10	-8	1day
6	6 th	125	50	130	5	3.8	1day
7	7 th	130	50	134	4	2.9	1 day

Organoleptic characters of Shuddha Suvarnagairika documented in table 3.

Table 3: Showing organoleptic characters of Shuddha Suvarnagairika.

Parameters	Raw Suvarnagairika	Sample I	Sample II
Color	Brick red	Dark brick red	Brick red
Odor	-	Specific	Specific
Taste	Madhura, Kashaya	Madhura, Kashaya	Madhura, Kashaya
Touch	Khara	Snigdha, Mrudu	Mrudu, Shlakshna
Weight	100 g	114 g	134 g
Duration	-	30 min	7 days

Sample I- Goghruata Shodhita Suvarnagairika.

Sample II- Godugdha Shodhita Suvarnagairika.

RESULTS AND DISCUSSION

Pharmaceutical procedures in the present study include purification of raw Suvarnagairika with two different methods.

First method in which Suvarnagairika was purified with Goghruata, according to the reference from Ayurveda Prakasha. The quantity of Goghruata was not mentioned

by Ayurveda Prakasha, but in the commentary of Rasaratnasamucchaya by D.A.Kulkarni the amount of Ghruta was mentioned as ¼ of raw material. So in present study this quotation was taken as reference for purification of Suvarnagairika by Ghrutabharjana method.

In this method after purification the color changes to dark brick red color. Till date there is no standard set for process of purification of Suvarnagairika by Ghrutabharjana method, i.e. how much time heat will be given? In classics only color examination was given to check purification, but it is not enough to say material

get purified, based on color change, as Suvarnagairika changes color in dark brisk red within very few minute. So it is need of hour to standardize the process. According to Vrudha vaidya Parampara heat was given till all Ghruta get evaporated.

In present study Suvarnagairika was heated on slow flame till all fumes get subside from material, it takes about ½ hour. Here we didn't follow the reference of Vrুদ্ধha Vaidhya, as if all Goghruta gets evaporated then Shuddha Suvarnagairika will be dry in nature which will not very effective therapeutically. In the final yield 4 gm. weight was added to the purified Suvarnagairika. This is due to weight of Goghruta added to final yield.

In second method Suvarnagairika was purified with Godugdha, according to the reference mentioned in Rasaratnasamucchaya. In this method total 7 trituration was given to purify the Suvarnagairika. For each trituration fresh cow milk was used and after each trituration the material was dried in heavy sunlight to overcome smell of milk. For first trituration much more milk was required i.e. 130ml, but the quantity get reduced from second to seventh trituration. From 3rd to 7th trituration 50 ml constant cow milk was required (Table 2). A lot of variation was observed in final yield from each trituration. (Table 2). After each trituration weight should be added to final yield, due to amount of cow milk was added to mixture and some extract from cow milk have to be added in final yield, but after 2nd and 5th trituration final weight of purified Suvarnagairika was decreased (table 2), it may be due to handling loss differ in each trituration.

From table 3, it can be said that method 1 (Goghruta Bharjana) of Suvarnagairika Shodhana is better than method 2 (Godugdha Bhavana). First method require less time and labor while method 2 require much more time, sunny environment and hard labor work too for Bhavana. In the view of final yield, method 2 is better, as it gains about 14% of original weight.

Which method (Goghruta Bharjana / Godugdha Bhavana) of shodhana for Suvarnagairika is better for therapeutic efficacy will be known after its analysis only. This will be remaining to work for future research.

CONCLUSION

Suvarnagairika shodhana done by second method (Godugdha bhavana), following the method prescribed in Ayurved Prakash measures more weight than first method (Goghruta Bharjita from R.R.S.).

REFERENCES

1. Shastri S.N. Charaka samhita of Agnivesha part I, Commentry by Shastri K., Chaturvedi G, ch.9, ver.3, Chaukhambha Bharati Academy, Reprint, 2008; 191.

2. Sharma S. Rasa Tarangini, Taranga 2nd, ver.52, 11th Reprint edition, New Delhi, Motilal Banarasidas, 2009; 21.
3. Sharma S. Rasa Tarangini, Taranga 2nd, Ver.49-51, 11th Reprint edition, New Delhi, Motilala Banarasidas, 2009; 21.
4. Mishra GS, editor Ayrurved Prakasha of Madhava Upadhyaya, ch.2, ver-278, Reprint edition, Varanasi Chaukhambha Bharati Academy, 2007; 325.
5. D.A.Kulkarni, Commentator, Rasa Ratna Sammucchaya of Vagbhata, First part, Ch.3, ver.49, Reprint edition, Meharchand Lachhmandas publication, New Delhi, 2007; 49.
6. Shastri A. Rasa Ratna Sammucchaya of Vagbhata, ch. 3, ver.49, 9th edition Chaukhambha Amarbharati, Varanasi, 1995; 70.
7. Shastri A. Bhaishajya Ratnavali, Paribhasha Prakarana Ch.4, ver.61, 2nd edition, Varanasib Chaukhamba Sanskrita Sansthana, 2002; 74.