

PHARMACEUTICAL STANDARDIZATION OF HARITAKYADI GUTIKA

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ABSTRACT

Haritakyadi Gutika is an important ayurvedic polyherbal formulation. It should be used in kasa (chronic cough), and shwasa (asthma). **Aim:** The objective was to exploit the standard manufacturing procedure (SMP) and quality standards of Haritakyadi Gutika. **Materials and Methods:** In this present study, Haritakyadi Gutika was prepared in three batches to produce SMP. **Results:** Ingredients of Haritakyadi Gutika in which average percentage yield of Haritaki Churna was 94.26%, Nagar Churna was 94.41%, Musta Churna 94.14 % and Guda Paka was 99.20%; Averagely 91% *Haritakyadi Gutika* was obtained from total ingredients. **Conclusion:** Pharmaceutical Standardization made re-genesis of drug and production of secure potent drugs and useful in scientific area of research in future.

KEYWORDS: *Haritakyadi Gutika*, Churna preparation, Standardization.

INTRODUCTION

Haritakyadi Gutika is an important formulation in Ayurveda under the category of Polyherbal Medicine mentioned in *Kasa (Cough) Chikitsa Prakarana* of *Chakradatta* 11th *Adhyaya*.^[1]

Triumph by Ayurvedic Medicine was totally dependent on the quality of medicine prescribed to patient. In *Chatushpad*, All treatise of Ayurveda given importance to *Vaidya*.^[2] An ancient time, *vaidya* used traditional method of preparation of medicine according to diseases. The herbal medication of Ayurved retrieve the Siddhant of '*Sarvam Dravyam Panchbhautikam Asmin Arthe*'.^[3] These *Haritakyadi Gutika* medicine was prepared by the method given in *Sharangdhar Samhita*.^[4] The ingredients present in the *Haritakyadi Gutika* are *Haritaki churna* (*Terminalia chebula*), *Nagarchurna* (*Zingiber officinale*), *Musta churna* (*Cyperus rotundus*), *Guda* (*Saccharum officinarum*). As this yoga was indicated in *Kasa* (Chronic cough) *Chikitsa*, *Purana* (Old) *Guda* (Jaggery) was preferably used for present study. This *Gutika* also used in the treatment of *Shwasa* (Chronic asthma). The specific pharmaceutical homogenous mixture of these contents can result in a more significant formulation. Therefore the present study has been planned to standardize the method of preparation of *Haritakyadi Gutika* according to method explained in classical texts. *Vatak*, *Gutika*, *Vati*, *Modaka*, *Vatika*, *Pindi*, *Guda* and *Varti* are the synonyms of *vati*.^[5] All these terminologies are used as synonyms for *vati* in different part of classics. *Gutika* is a rounded shaped pill being purposefully used for internal administration.

MATERIAL AND METHODS

Collection of raw materials.

Sr. No.	Raw Material	Latin Name	Part Used
1	<i>Haritaki</i>	<i>Terminalia chebula</i>	Fruit
2	<i>Nagar</i>	<i>Zingiber officinale</i>	Rhizome
3	<i>Musta</i>	<i>Cyperus rotundus</i>	Root
4	<i>Guda(Jaggery)</i>	<i>Saccharum officinarum</i>	-

Haritaki, *Nagar*, *Musta* and *Guda* were obtained from the local market of Yeola, Dist. Nashik. Preparation of *Haritakyadi Gutika* with the reference of *Sharangadhar Samhita*, was carried out in the Department of Rasashastra & Bhaishajyakalpana, Matoshri Asarabai Darade Ayurved College, Babhulgaon, Tal-Yeola, Dist.-Nashik, Maharashtra.

Equipment Used

Khalwa (Stone Khalwayantra, Length 12 inch), Stainless steel container 3 litre capacity, Stainless steel tray (length – 24 inch, width – 24 inch), Ladle stainless steel length: 15 cm, Cloth: clean cotton cloth of 1 × 1 feet, measuring machine: 2 kg capacity, and gas burner with LPG cylinder (14.5 kg capacity) were used in making process of *Gutika*.

Pharmaceutical Preparation of *Haritakyadi Gutika***Study was carried out in three stages**

- 1) **Stage I** -*Haritaki, Nagar, Musta Churna* preparation.
- 2) **Stage II** - Liquefaction of *Guda* (Jaggery) as per symptoms of *Guda paka*.
- 3) **Stage III** - Preparation of homogenous mixture of all ingredients and making of *Haritakyadi Gutika*

Stage I***Haritaki Churna* Preparation**

Ingredients :- Dry *Haritaki* Fruit - 100 g

Procedure :- Dried *Haritaki* checked for any external impurities then it taken and triturated into clean *khalwa yantra* and filtered through clean white cotton cloth to obtain very fine powder.^[6]

Observation :- Brownish coloured *Haritaki Churna* was obtained.

***Nagar Churna* Preparation**

Ingredients :- Dry *Nagar* (Ginger) Rhizome 100 g.

Procedure :- Dried *Nagar* checked for any external impurities then it taken and triturated into clean *khalwa yantra* and filtered through clean white cotton cloth to obtain very fine powder.

Observation :- White or Slightly Brownish coloured *nagar churna* was obtained.

***Musta Churna* Preparation**

Ingredients:- Dry *Musta* root 100 g.

Procedure:- Dried *Musta* root checked for any external impurities then it taken and triturated into clean *khalwa yantra* and filtered through clean white cotton cloth to obtain very fine powder.

Observation:- Brownish coloured *musta churna* was obtained.

Stage 2 - Preparation of *Guda Paka*

After removal of external impurities, clean raw *Guda* should be taken in equal quantity of *churna* (about 300 g) into clean wide mouthed stainless steel vessel of 3 liter sizes. It is added with required 5 ml quantity of water, placed over mild fire and heated with frequent stirring.

Stage 3 -Preparation of homogenous mixture of all ingredients and making of *Haritakyadi Gutika*.

Preparation of homogenous mixture of all ingredients

When *Gudapaka* of suitable consistency was obtained then removed from fire and the fine powder of *haritaki*, *nagar*, *musta* was added one by one into the vessel containing *Guda paka*. Homogeneous mixture of all ingredients was formed.

Making of *Haritakyadi Gutika*

After Homogeneous mixture of all ingredients it left for self-cooling. After cooling of mixture, *Gutika* (Pills) were made by hand with equal shape, size and weight. The prepared *Haritakyadi Gutika* were later dried in shade and stored in airtight container.^[7]

Images showing the preparation of *Haritakyadi Gutika*



1) Haritaki



3) Nagar



5) Musta



2) Haritaki Churna



4) Nagar Churna



6) Musta Churna



7) Khalwa yantra



8) Guda

**9) GUDA PAKA****10) HARITAKYADI GUTIKA**

- 1) Haritaki
- 2) Haritaki churna
- 3) Nagar
- 4) Nagar churna
- 5) Musta
- 6) Musta churna
- 7) Khalwa Yantra
- 8) Guda
- 9) Guda Paka
- 10) Haritakyadi Gutika

RESULT

Table No 1: Showing the result of *Haritaki Churna* Preparation.

Batch	Initial weight of raw <i>Haritaki</i> (g) (before cleaning)	Initial weight of raw <i>Haritaki</i> (g) (after cleaning)	Weight of obtained <i>Haritaki</i> churna (g)	Weight loss(g)	Yield (%)
I	100	98	93	5	94.89
II	100	96.5	91	5.5	94.30
III	100	94	88	6	93.61
Average	100	96	91	5.5	94.26

Table No 2: Showing the result of *Nagar Churna* Preparation.

Batch	Initial weight of raw <i>Nagar</i> (g) (before cleaning)	Initial weight of raw <i>Nagar</i> (g) (after cleaning)	Weight of obtained <i>Nagar</i> churna (g)	Weight loss(g)	Yield (%)
I	100	96	90	6	93.75
II	100	94	88.5	5.5	94.14
III	100	97	92.5	4.5	95.36
Average	100	96	90	5	94.41

Table No 3: Showing the result of *Musta Churna* Preparation.

Batch	Initial weight of raw <i>Musta</i> (g) (before cleaning)	Initial weight of raw <i>Musta</i> (g) (after cleaning)	Weight of obtained <i>Musta churna</i> (g)	Weight loss(g)	Yield (%)
I	100	94	89	5	94.68
II	100	92	86	6	93.47
III	100	96	90.5	5.5	94.27
Average	100	94	89	5.5	94.14

Table No 4: Showing the result of *Gudapaka* Preparation.

Batch	Initial weight of raw <i>Guda</i> (g) (before cleaning)	Initial weight of raw <i>Guda</i> (g) (after cleaning)	Quantity of water (ml)	Weight of obtained <i>Guda Paka</i> (g)	Weight loss (g)	Yield (%)
I	300	294	05	292	2	99.31
II	300	296	05	293	3	98.98
III	300	295	05	293	2	99.32
Average	300	295	05	293	2	99.20

Table No 5: Showing the result of mixing of component drugs of *Haritakyadi Gutika*.

Batch	Initial weight of <i>Haritakyadi Gutika</i> before drying (g)	Final weight of <i>Haritakyadi Gutika</i> after drying (g)	Weight loss (g)	Total percentage of <i>Haritakyadi Gutika</i> obtained
I	564	549	15	91.5
II	558.5	540	18.5	90
III	564	545	19	91
Average	562	549	17.5	91

DISCUSSION

As per classical texts of *Chakradatta*, *Haritaki*, *Nagar*, *Musta* equal amount of fine powder mixed with equal quantity of *guda* (jaggery) & prepared *Gutika* used in *kasa* (chronic cough) and *shwasa* (asthma) diseases.^[8]

Properties of *haritaki* are light to digest, *ruksha* qualities, Astringent dominance five rasa (except *lavana* rasa), sweet after digestion (*vipak*) with hot potency^[9] and properties of *nagar* are light to digest, *snigdha* qualities, pungent in taste, sweet after digestion (*vipak*) with hot potency^[10] while properties of *mustak* are light to digest, *ruksha* qualities, bitter, pungent, astringent in taste, pungent after digestion (*vipak*) with cold potency.^[11] Old /stored jaggery is light to digest (*laghu*), forms wholesome diet, doesn't block the channels, enhances digestive capacity, pacifies *pitta* and *vata*, sweet taste (*rasa*), aphrodisiac and vitalizes *Rakta* (i.e. improves haemoglobin).^[12]

The pharmaceutical procedures used in this study are *churna* preparation, *guda paka* preparation, *gutika* preparation. Dry *haritaki*, *nagar*, *musta* dravyas were made into very fine powder as per reference of *Sharangdhar Samhita*.

In stainless steel vessel, *Gudapaka* made by the references present in *Sharangdhar Samhita* and fine powder of *Haritaki*, *Nagar*, *Musta* were mixed to this *Guda Paka* and homogeneous mixture was formed. After that *Gutika* were prepared later dried in shade & stored in airtight container.

Initially after preparation of *Haritakyadi Gutika* weight were found as per batch 564 g, 558.5 g, 564 g, average 562 g; then this *gutika* dried in shade again and measured weight again as per batch were found that 549 g, 540 g, 545 g & average 549 g weight. In total 3 batches of *Haritakyadi Gutika*, Batch I prepared 91.5% *gutika* from total components of drugs while batch II prepared 90% *gutika* and batch III prepared 91% *gutika* from given component.

CONCLUSION

Averagely 91% *Haritakyadi Gutika* was obtained from total ingredients and average 9% loss was found due to removal of external impurities, sticking to the vessel and moisture.

Pharmaceutical Standardization being an initial step towards standardization of any drug. So, it should be done with extreme precision. This leads to re-genesis of drug and production of secure potent drugs. It will be help to scientific researcher in future.

Conflict of Interest: No conflict of interest.

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