

# Process Standardization of Sunthi Ghrita

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**Abstract:** *Sneha kalpana is one of the medicinal preparation in Ayurvedic therapeutics, have been used since more than thousands of years ago with the aim to achieve both water soluble and fat soluble medicaments within the same dosage form, thereby providing a broad range of therapeutic characteristics. Sneha Kalpana can be defined as one of the secondary dosage forms of Ayurvedic healing system, where various crude medicaments in their primary dosage forms like Kalka, Kwath, etc. are cooked in Sneha dravya along with some gandhadravya (fragrance materials) and milk etc. Sunthi Ghrita is a preparation of Sunthi kalka [zingiber officinale], Dashmool kwath and Ghrita. This preparation is used for the treatment of Ghrani rog and prepared by Sneha Paka process as mentioned in classical text books of Ayurveda. It is prepared on mild heat and took 07 days to complete the process. During the manufacturing process temperature as well as Siddhi lakshana(chief desired character of finished product) mentioned in Ayurveda was recorded.*

**Keywords:** Sunthi Ghrita, Sneha Paka, Murchana.

## 1. Introduction

Sunthi [zingiber officinale] helps to reduce inflammation hence it can be used to treat inflammatory disorders such as Arthritis. The herb has the properties to treat indigestive problems, cough, cold and provide immunity against respiratory diseases.<sup>[1]</sup>

Ghrut [ghee] is one of the most widely used animal products since Vedic era till now, with various domestic as well as medicinal use. Mostly ghee from cow's milk and buffalo milk are used for manufacturing Ayurvedic medicines now days or use otherwise as single drug for different purposes.<sup>[2]</sup>

Murchana is the first step towards any sneha paka process as described in most of the Literature earlier it has been mentioned in Chakra Dutta by Acharya Chakrapani<sup>[3]</sup> and Ratnaprabha by Acharya Nischalker<sup>[4]</sup> here is just a mentioned about Murchana. Later on it is detailed in Bhaishajya Ratnavali[B.R.] written by Acharya Govind Das Sen.<sup>[5]</sup>

Ghruta Kalpana plays an important role in treatment both internally and externally, if taken internally it enters the systemic circulation and can easily cross the blood brain barrier there by strengthen or stimulate the central nervous system. When used for topical application it has the potential to defuse locally into the soft tissue and produce the desired therapeutic action of ghrita.<sup>[7]</sup>

In current research work the Sunthi Ghrita was prepared by following the standard operative procedure mentioned in [B.R.], context of Grahani roga and murchana was done as per the 'SOP' mentioned in the context of Jwararoga.<sup>[5]</sup>

## GHRITA MURCHANA<sup>[6]</sup>

### Materials and Methods:

#### Materials

Drug:

Haritaki [Terminalia chebula] = 2 Pala[96gm]

Vibhitaki[Terminalia bellirica] = 2 pala  
Amalaki [Phyllanthusemblica] = 2pala  
Nagarmotha [CyperusRotundus] = 2 Pala [96gm]  
Haridra [Curcuma longa] = 2 Pala [96gm]  
Sneha = 2 Prastha [1500ml]  
Matulung swarasa [Citrus medica] = q.s.

### Method

At first *Triphala*, *Mustaka* and *Haridra* were washed and pounded separately to paste or coarse powder form, Matulunga nimbu were collected and *Swarasa* (juice) was extracted. After this, the given amount of ghee is heated in a clean and dry container for some time, then juice was added slowly to the hot ghee, with stirring.

Then after some time, earlier prepared paste was added and cooked in mild fire. The process was continued till the froth appeared initially, get disappeared and odor of ingredient materials observed, with desired color. It took 03 days to complete the process with daily cooking time 1-2hr at mild heat.

During the process, features of *ghrita paka* were observed and recorded. After observing the chief desired characters of *ghrita paka* fire was put off and materials were filtered to separate the *kalka* and ghee. Filtrate was stored with proper labeling in the name of *Murchit ghrita*.

**Observations:** Following observations were observed and documented.

- After the addition of matulunga swarasa froth was observed and later on spreads all around the ghee and subside due to continuous stirring.
- Soon after addition of haridra kalka profuse frothing occurred that gradually suppressed.
- During the process of ghrita murchana, aromatic odour was observed that intensifies at the end.
- The procedure of ghrita murchana was completed in 3 days with firing 1-2hr daily and sufficient cooling period was maintained as part of 'SOP' to achieve the optimum active principles of ingredients into ghee medium.

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- Colour of murchit ghrita change into reddish brown.
- The temperature maintained throughout the procedure was 95 to 102°C.
- Loss was observed in the final yield of ghrit due to the soaking of ghrita into kalka materials.
- Process was stopped at the stage of Madhya-paka for further continuation of the process.<sup>[7]</sup>

After the process of *Murchana*, Sunthi ghrita was prepared.

**Initially amount of ghrita = 1500ml**

**Finally prepared Murchit Ghrita =1300ml**

**Loss observed with respect to murchita ghee =200ml**

**Preparation of Sunthi Ghrita.<sup>[5]</sup>**

## Materials and Method

### Material

Drugs:

Murchit Go-Ghrit. = 1500 ml[1 part]

Sunthi Kalka. = 375gm [1/4th]

Dashmool kwath = 24 lit [16<sup>th</sup> part of Sneha]

Equipments:

Weighing Machine,

Wide Mouthed S.S Vessels,

Khalwayantra [Stone Mortar and Pestle],

Darvi [Ladle],

Clean Cotton cloth,

Chullika [Heating Device]

### Method

- *Murchit Sunthi ghrita* was prepared with *Murchit ghrita*.
- First of all Murchit ghrita was heated on mild heat, when ghrita was slightly warm then dashmool kwath was added and stirred continuously to subside the froth evolved due to adding of dashmool kwath on warm ghee.
- When dashmool kwath was spread all across the ghee medium then gradually kalka was added with continuous stirring by following the standard operative procedure of sneha kalpana
- In first day whole material was heated up to boiling for one hour, after that heating process was stopped. In second day heating process was started again and heated for 2hr after that, heating process was again stopped.
- In third day heating process again started and continued up to obtaining *Sneha siddhi lakshana* [ancient quality control parameters for sneha kalpana] like varti-vat Sneha kalka [wick-like shape], sabdhinoagni nikshipto '[does not produce crackling sound on fire] etc.
- When Sneha siddhi lakshana was obtained, then Ghrita was filtered with the help of cotton cloth. This filtered Ghrita was known as Murchit Sunthi Ghrita.

### Observation

- After the addition of dashmool kwath froth was observed and later on spreads all around the ghee and subside due to continuous stirring. Soon after addition of sunthi kalka also frothing occurred that gradually suppressed.
- During the processing, aromatic odour was observed that intensifies at the end.
- The preparation of *Murchit sunthi ghrita* was completed in 7 days with firing 1-2hr daily and sufficient cooling

period was maintained as part of 'SOP' to achieve the optimum active principles of ingredients into ghee medium.

- Colour of prepared Murchit sunthi ghrita change into reddish brown. The temperature maintained throughout the procedure was 95 to 102°C.
- Loss was observed in the final yield of ghrita due to the soaking of ghrita into kalka materials.
- Process was stopped at the stage of Madhya-paka for further continuation of the process.

**Initially amount of Murchita ghrita = 1300ml**

**Finally prepared Sunthi Ghrita =1250ml**

**Loss observed with respect to murchit ghee =50ml**

## 2. Discussion

*Murchana* causes the removal of *Amadosha* which inhibit lipid per oxidation and incorporated antioxidant property for augmentation of medicinal properties of the medicated Taila/Ghrita. *Amadosha* may be considered as unwanted component among the raw Ghrita, like intermediate chemical constituents, dissolved gases, adulterants, plant toxins and moisture present in raw ghrita or developed due to long time storage. *Murchana* helps in maintaining the necessary ratio of unsaturated and saturated fats suitable for human physiology. Kalka dravya was added after adding of Swarasa so that burning of kalka dravya will not takes place and active constituents of drugs will be protected destroyed.<sup>[8]</sup>

Kalka dravya used for preparation was made in to powder so that maximum percentage of active constituents goes in to preparation. The weight of kalka dravya after preparation was increased. This increase the amount of kalka dravya due to absorption of Ghrita and dravya dravya used in preparation. Weight of Sunthi ghrita was decreased that of *Murchita* Ghrita. From above it is clear that there was loss of Ghrita due to absorption of Ghrita by the kalkadravya. Preparation of Sunthi Ghrita was done on madhyam agni (Medium temperature) at high temperature kalka dravya will get burnt because all liquid constituents will be evaporated early and less liquid material will be available for preparation. Due to this fact Ayurvedic doctrines always advices to prepare *ghrita* preparation over medium temperature in order to incorporate maximum therapeutic properties in Sunthi Ghrita.

Siddhi Lakshana like "Shabda syauparamaprapti" suggests reduction of water i.e. extent of moisture content. When water remains in the ghrita it produces the cracking sound and this sound disappears gradually after reduction of water. "Gandha varna ras adi nam sampatau" suggest that production of desired specific characteristics of odor, colour, and taste because of active constituents are transferred into the ghrita media. 'Phenashanti'<sup>[1]</sup> and 'Viphenaparichapalagata', specifically for Ghrita suggest that there is no production of any gases resultant into absence of frothing. When kalka dravya of ghrita was put on fire it does not produces any sound that indicate kalka dravya was devoid of moisture. When kalka dravya was put between two fingers and was rolled, then it became *varti* like shape that indicate proper sign of Sneha paka. During this

stage the active component of kalka will properly assimilate in the Ghee (Ghrita).<sup>[7][8]</sup>

The initial quantity of plain ghrita for murchana process was 1500 ml and after the process final murchit ghrit was 1300ml. Total loss was 13%. In the process of making sunthi ghrit the initial volume was 1300ml and prepared sunthi ghrit was 1250ml . Total loss was only 4-5%.

### 3. Conclusion

In present research the formula of Sunthi Ghrita selected from the reference of Bhashajya Ratnavali. Sneha Kalpana is an effective and potent Kalpana which may contain water as well as fat-soluble active principles. Sneha Kalpana has different therapeutic uses described systematically in many Ayurvedic classical literature. Sneha kalpanas are advised for both external and internal use. Medicated Ghrita also have specific benefit of nutrition and it preserve the drug for longer time. Sneha Kalpana is a unique contribution to Ayurvedic science. *Ghrita Murchana* is a special pharmaceutical procedure where before subjecting the drugs to *Snehapaka*, *murchana* process was adopted for removing rancidity factors and removal of odor, imparting color and increasing potency of the drug.

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