Review of Guggul Asava mentioned in Gada Nigraha

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ABSTRACT

Guggulu Asva is a unique Asava Arishtha mentioned in the text of Gada Nighraha which is indicated in Shwasa, Kasa, Bhagandara, Prameha, etc. but this particular formulation is not available in the market. Many formulations of Guggulu are available in the market like Vati, Choorna, Ghrita, Taila, etc. but Asava Arishtas of Guggulu are not available. Here, an attempt is made to prepare Guggulu Asava and understand the reason behind its unavailability and also its analytical study is carried out.

Key words: Guggulu Asava, Asava Arishta, Gada Nighraha, Bhagandara

INTRODUCTION

Asava Arishtas are unique dosage forms, known for their quick therapeutic action and infinite shelf life. It is said that, the older the better it is. Lot of classical formulations are available under this dosage form in various texts. While going through the same a very interesting formulation Guggulu Asava [1] is found mentioned under Asava Adhikara of Gadanigraha.

The duration of this preparation is pretty long compared to other similar formulations, making this formulation unique. It is indicated in Shwasa, Kasa, Bhagandara, Prameha, etc. but this particular formulation is not available in the market. Many formulations of Guggulu are available in the market like Vati, Choorna, Ghrita, Taila, etc. but Asava Arishtas of Guggulu are not available. Here, an attempt is made to prepare Guggulu Asava and understand the reason behind its unavailability and also its analytical study is carried out.

MATERIALS AND METHODS

Three samples of Guggulu Asava are prepared as per the guidelines of the classical literature.

Only difference between three samples is time of addition of Ikshu Shukta.

LIST OF THE INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haritaki</td>
<td>33 no.</td>
</tr>
<tr>
<td>Vibhitaki</td>
<td>33 no.</td>
</tr>
<tr>
<td>Amalaki</td>
<td>256g</td>
</tr>
<tr>
<td>Guggulu</td>
<td>256g</td>
</tr>
<tr>
<td>Twak</td>
<td>5.8g</td>
</tr>
<tr>
<td>Ela</td>
<td>5.8g</td>
</tr>
<tr>
<td>Pippali Mula</td>
<td>5.8g</td>
</tr>
<tr>
<td>Chavya</td>
<td>5.8g</td>
</tr>
</tbody>
</table>

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Ikshu Shukta was prepared as per the reference of Sharangadhara Samhita, Madhya Kanda, 10/7
Guggulu Shodhana was carried out as per the reference of Rasajalanidhi, Trutiya Kanda 8

Method of preparation of Guggulu Asava

Sample 1

Purva Karma
- Shodhana of Guggulu
- Selection of Sandhana Patra
- Patra Samskara
- Cleaning of Dhataki Pushpa

Pradhana Karma

Preparation of Kashaya

Ingredients 1 to 15 except Guggulu were collected in mentioned quantity and pounded in Khalwayantra to make Shuksha Choorna.

Drugs were then filtered thought cora cloth and fine powder was collected.

In a clean and dry stainless steel vessel 16 parts of water were added and reduced to 1/4th part.

Guggulu was added at the time of boiling of the Kashaya to have a ease of addition of Guggulu due to its stickiness.

Filtration:
The Kashaya was filtered through a double layered cotton cloth.

Kashaya was filtered when it was still hot to avoid the hardening to Guggulu.

Addition of Guda

Guda was melted in ½ liter of Kashaya and filtered through double folded cloth.

Addition of Prakshepaka Dravyas
- Draksha, Dadima and Khada are the Prakshepaka Dravays mentioned in Yoga.
- Draksha were soaked overnight, cleaned well and grinded in mixer grinder.
- Fresh Dadima fruit was peeled and grinded in mixer grinder.
- Khanda Shankara was grinded and made into fine powder.

Addition of Kashaya, Guda, Prakshepaka and Dhataki Pushpa to Dhupit Sandhana Patra
- Filtered Kashaya and Guda were added to Sandhana Patra after complete cooling.
- After words Draksha Dadimba and Khanda Shankara were added respectively
- Cleaned Dhataki Pushpa were added and mixture was stirred well.
- After words vessel was tied with cloth and kept in Nirvata Sthana

Addition of Ikshu Shukta
- Prepared Ikshu Shukta was added to Sandhana Patra on 3rd day. (10/2/2019)
Note: According to the reference addition of Ikshu Shukta is advised to be done after the formation of Jatarasa.

Jata Rasa can be understood as when the smell, color, etc. of ingredients is appreciable in the Yoga. (As per Guggulu Asava reference)

As good smell of ingredients was appreciable on 3rd day, addition of Ikshu Shukta was done.

Paschat Karma:

- The onset of fermentation was observed on 14th April 2019. Proper Sandhibandhana was carried out.
- Sandhi Bandhana was opened on 20th of April and it was found that the fermentation was still on. So, the sealing was done for the second time.
- Sandhi Bandhana was opened on 12th may 2019 & found that the fermentation was complete.
- But even after completion of Sandhana, sample was still kept as such so as to follow the instruction given in the text regarding Guggulu Asava.
- The filtration was carried out with Kora cloth and total 6.2 liters of was obtained.

Sample 2

Method of preparation is same like sample 1; the only difference is in the time of addition of Ikshu Shukta.

Addition of Ikshu Shukta

Prepared Ikshu Shukta was added to Sandhana Patra on 124th day. (8/9/2019)

Note: According to the reference addition of Ikshu Shukta is advised to be added after the formation of Jatarasa.

According to Sushruta Acharya, completion of fermentation of Asava is considered as Jata Rasa. (Jaatrasam Vyaktalam ) Su.Su.44/44

Paschat Karma:

The onset of fermentation was observed on 10/7/2019. Proper Sandhibandhana was carried out.

Sandhibandhana was opened on 15/7/2019 and it was found that the fermentation was still on. So, the sealing was done for the second time.

Sandhibandhana was opened on 30th may 2019, Sinking of Dhataki Pushpas were observed almost by 80% on, strong alcoholic smell was appreciable and candle test was positive.

Sandhibandhana was opened on 18th June - Dhataki Pushpas and Draksa were completely sunk to the bottom and candle test was negative. At this time Ikshu Shukta was added to the Patra.

But even after completion of Sandhana, sample was still kept as such so as to follow the instruction given in the text regarding Guggulu Asava.

The filtration was carried out with Kora cloth and total 6 liters of Asava was obtained. Observations and difficulties faced in sample 2&3 were same as mentioned in sample 1.

Sample 3

Method of preparation is same like sample 1, the only difference is in the time of addition of Ikshu Shukta.

Addition of Ikshu Shukta

Prepared Ikshu Shukta was added to Sandhana Patra on 33rd day, 22/6/2019

Note: Ikshu Shukts was added on the day of onset of Sandhana. According to Acharya Sushruta, Jata Rasa can also be interrelated as initiation of Sandhan. (Jaatrasam Vyaktalam) Su.Su.44/44

Paschat Karma

The onset of fermentation was observed on 22nd June 2019. At this time Ikshu Shukta was added, proper Sandhibandhana was carried out.

Sandhibandhana was opened on 8th July 2019 and it was found that the fermentation was still on. So, the sealing was done for the second time.

Sandhibandhana was opened on 23rd July 2019, Sinking of Dhataki Pushpas were observed almost by 80% on, strong alcoholic smell was appreciable and candle test was positive.

Sandhibandhana was opened on 24th August - Dhataki Pushpas and Draksa were completely sunk to the bottom and candle test was negative.

But even after completion of Sandhana, sample was still kept as such so as to follow the instruction given in the text regarding Guggulu Asava.
The filtration was carried out with Kora cloth and total 5.5 liters of Asava was obtained.

**Date of initiation and completion of Sandhana in 3 samples**

<table>
<thead>
<tr>
<th>SN</th>
<th>Date of preparation</th>
<th>Sandhana started on</th>
<th>Sandhana completed on</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>7/2/2019</td>
<td>14/4/2019(68d)</td>
<td>13/5/2019 (97 days)</td>
</tr>
<tr>
<td>2.</td>
<td>9/3/2019</td>
<td>10/7/2019(62d)</td>
<td>8/9/2019 (124 days)</td>
</tr>
<tr>
<td>3.</td>
<td>21/5/2019</td>
<td>22/6/2019(33d)</td>
<td>24/8/2019 (67 days)</td>
</tr>
</tbody>
</table>

**RESULT AND DISCUSSION**

All the three samples were analyzed for Alcohol percentage, pH, Total solids, Reducing and non-reducing sugars. These parameters are studied twice, once after the completion of fermentation, and again after 6 months. The *Ikshushukta* was analyzed for the same parameters after completion of fermentation.

**Alcohol percentage**

This is a measure of quantity of alcohol in the sample. It can be that, sample 3 had higher alcohol % as compared to other 2 samples and also the alcohol % well within prescribed limit. It was observed that alcohol percentage reduced in 6 months in sample 1 while it increased in sample 2 & 3 it is also to be noted that in spite of adding *Ikshu Shukta* to an already fermented product, the alcohol % has remained substantially low.

**Total solids**

Total solid includes suspended as well as dissolved solids and it can be mark for efficacy of a product. In sample 3 the *Ikshu Shukta* was added after initiation of fermentation. Hence was present throughout the process of fermentation and as well as ageing and hence it might have led to presence of more solids. If we rate sample-1 values, it can be seen that the total solids in that is not significantly low as compared to sample-3, since here also *Ikshu Shukta* was added to the product on the 3rd day itself and hence it was there for longer duration for chemical interaction.

**Reducing & non reducing sugar**

They are high in sample-3 followed by sample-1. It can also be noted that the quantity of reducing sugars reduces after 6 months indicating the process of active fermentation. It can also be noted that the quantity of reducing sugars decreased substantially in sample-2 where *Ikshushukta* was added after fermentation, which must have acted as a fermented accelerated. Also reducing sugar is responsible for making alcohol more soluble in water and thus its absorption easier. So, the presence of more reducing sugar can hint towards better efficacy of the product.

**HPLC**

HPLC reports are suggestive of more levels of *Guggulu* sterone in sample 3 as compared to sample 1 and sample 2. Alcohol percentage of sample 3 was higher than sample 1 and sample 2; It can be interpreted that *Guggulu* sterone levels were high in third sample due to high amount of alcohol percentage as compared to all other samples.

**REFERENCES**
