Comparative analytical study of *Ashuddha Karaveera* and *Shuddha Karaveera*

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**ABSTRACT**

*Karaveera* (*Cerebra thevetia Linn.*) is reported under *Upavisha Dravya* in classical ayurvedic pharmacopeias. It is observed that *Shodhana* (purification procedures) of the mool should be carried out before its internal administration. There are different *Shodhana* methods mentioned in Ayurveda. In this study *Godugdha* was used as media. The impact of *Shodhana* was evaluated by physico analytical study. It clearly proves physico analytical changes during *Shodhana*. *Ashuddha Karaveera* was taken on white clean cloth and they dumped in *Pottali* with *Godugdha*. *Pottali* was tied to middle of wooden rod dipped in *Godugdha* in stainless steel vessel and mild heat given to pottali in *Dolayantra*. *Shuddha Karaveera* was obtained and then washed with luke warm water and dried. *Ashuddha Karaveera* contains toxin in it which was removed after *Shodhana* process. So that foreign matter, loss on drying was less in *Shuddha Karaveera* and due to *Shodhana* process with *Godugdha* total ash, acid insoluble ash was more than that of *Ashuddha Karaveera*.

**Key words:** *Shuddha Karaveera, Ashuddha Karveera, Godugdha, Shodhana.*

**INTRODUCTION**

*Karaveera* is a large glabrous evergreen shrub with white latex. which is about 12 ft. long. *Karaveera* is herbal plant which though toxic but has been found to have Ayurvedic uses. Leaves of this plant are green in colour which is about 10-15 cm long and 1- 2.5 cm in width. Fruits in yellow/*Peeta Karaveera* which is round. Root system of this plant is highly branched. *Karaveera* grows throughout India, it is found in Himalaya from Nepal to Kashmir upto 1000 metres. It is reported under *Upavisha* in classical *Ayurvedic* pharmacopeias. The present study was planned to evaluate the impact of *Shodhana* on *Ashuddha Karaveera* and to compare physico analytical parameters of *Ashuddha Karaveera* and *Shuddha Karaveera*.

**Latin Name:** Cerebella Thevetia Linn.

**Family:** Apocynaeceae

**Synonyms**
- Sanskrit: Ashwamarak, Haymar, Mahavir, Hayaghna, Shakumbha.
- English: Indian oleander (Yellow)
- Hindi: Kaner
- Marathi: Kanher.

**Properties**

**Pharmacodynamics of Karaveera**[1],[2]

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Rasa</th>
<th>Guna</th>
<th>Virya</th>
<th>Vipaka</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shuddha Karaveera</td>
<td>Tikta, Katu, Kashaya</td>
<td>Laghu</td>
<td></td>
<td>Ushna, Katu</td>
</tr>
</tbody>
</table>

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Pharmacokinetics of Shuddha Karaveera

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Doshagnata</th>
<th>Karma</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Shuddha Karaveera</td>
<td>Kapha-Vata</td>
<td>Kusthaghna, Kandughna, Vranashodhana, Shophaghna</td>
</tr>
</tbody>
</table>

Karaveera is pungent and bitter, astringent in taste and also pungent in the post digestive effect and has not potency. It elevates Kapha and Vata Doshas and possesses light unctuous, sharp (Tikshna) and hot (Ushna) attributes. It is an efficient useful treatment in conditions like snake bites, ulcers, cardiac diseases, Asthma, Chronic stomach diseases, Krimi, Kushtha.


Chemical constituents and action

Karaveera
- Neriodorin
- Neriodorein
- Glucoside – Rosaginine
- Neriene
- Volatile oil

Action: Antibacterial, Antifungal, Anti-inflammatory

Ashuddha Karaveera shows toxic effect like burning sensation in mouth followed by tingling and numbness of the tongue, dryness of throat and vomiting headache, dilated pupils and irregular heart rate, drowsiness, coma.

OBJECTIVES OF THE STUDY

To evaluate the impact of Shodhana of Ashuddha Karaveera and to compare the physico analytical parameters of Ashuddha Karaveera and Shuddha Karaveera.

MATERIALS AND METHODS

Equipment

1. Weighing machine
2. Measuring cylinder
3. Dola yantra
5. Cloth

Drugs used for Karaveera Shodhana

<table>
<thead>
<tr>
<th>No.</th>
<th>Drug</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ashuddha Karaveera Moola</td>
<td>200 gm</td>
</tr>
<tr>
<td>2.</td>
<td>Godugdha</td>
<td>3.5 litre</td>
</tr>
</tbody>
</table>

Methodology

Ayurveda has emphasized the importance of Shodhana procedure for various metals, herbs before use in any preparation. Shodhana procedure aimed at removal of toxins and brings about physical, chemical, biological changes in subjected drugs.

Method of Karaveera Shodhana

Godugdhe Daulikaswedad Karaveero Vishudhayati | (Rasmitra)

Karaveera Shodhana is done by Swedana in Godugdha.

1. Karaveera Moola was taken in a white clean cloth of required measurement and Pottali was prepared.
2. Pottali was tied in the middle of wooden rod.
3. Godugdha was taken in stainless steel vessel and the wooden rod was kept on vessel such that pottali was dipped completely in to Godugdha.
4. Mild heat was given for three hrs.
5. Quantity of Godugdha maintained by adding Godugdha repeatedly.
6. After completion of 3 hrs, heating was stopped and Dolayantra was allowed to cool and then Pottali was opened.
7. Shuddha Karaveera Moola thus obtained, was washed with luke warm water until all Godugdha was removed.
8. Karaveera Moola was dried in shade.
9. Coarse *Churna* was made from dried *Karaveera Moola*.

**Figure 1: Pictures depicting Karaveera Shodhana in Dolayantra**

**Ashuddha Karaveera heated with Godugda**

**Change in colour of Godugda**

**Shodhita Karaveera Moola**

**Observations during procedure**

**Karaveera Shodhana**

1. Initially, colour of *Godugda* was white which turned into brown.
2. During the process, after one and half hour, pleasant smell occurred.
3. Quantity of *Godugda* was maintained throughout process by adding *Godugda* two times.
4. After *Shodhana* process, hardness of *Karaveera Moola* reduced and *Twak* was separated.
5. After 5 days of drying, it became brittle with sound.

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Before Shodhana</th>
<th>After Shodhana</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Shabda</td>
<td>Slightly flexible</td>
<td>Brittle with sound</td>
</tr>
<tr>
<td>2.</td>
<td>Sparsha</td>
<td>Hard</td>
<td>Hardness reduced</td>
</tr>
<tr>
<td>3.</td>
<td>Rupa</td>
<td>Brown, With mold, Adherent Twak</td>
<td>Brown, Twak separated</td>
</tr>
<tr>
<td>4.</td>
<td>Gandha</td>
<td>Characteristic</td>
<td>Pleasant</td>
</tr>
</tbody>
</table>

**Organoleptic observations of Karaveera**

**Analytical result Ashuddha and Shuddha Karaveera Moola**

<table>
<thead>
<tr>
<th>No.</th>
<th>Parameter</th>
<th>Ashuddha Karveera</th>
<th>Shuddha Karaveera</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Loss on drying</td>
<td>3.9</td>
<td>6.54</td>
</tr>
<tr>
<td></td>
<td>Ashuddha Karaveera</td>
<td>Shuddha Karaveera</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-------------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>2. Total ash</td>
<td>3.01</td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>3. Acid insoluble ash</td>
<td>0.35</td>
<td>0.41</td>
<td></td>
</tr>
<tr>
<td>4. Water soluble extract</td>
<td>2.73</td>
<td>4.54</td>
<td></td>
</tr>
<tr>
<td>5. Foreign matter</td>
<td>1.15</td>
<td>0.41</td>
<td></td>
</tr>
</tbody>
</table>

**CONCLUSION**

*Shuddha Karavira* is softer than *Ashuddha Karavira* and shows more value of loss on drying than *Ashuddha Karavira*. *Ashuddha Karavira Moola* contains foreign matter like soil, Mold etc. which was not seen in *Shuddha Karavira Moola*. So that, ash value decreases in *Shuddha Karavira Moola*. The toxins contents in *Karaveera* reduced so that water soluble extractive value increased in *Shuddha Karaveera*.

**REFERENCES**


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