Experimental Study of Shweta Parpati Nirman w. s. r. to Ashodhit, Shodhit and Nirmalikruta Ingredients

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Abstract
There are various forms of Ras-aushadhi Nirman. One of the most popular form is Parpati kalpana Nirman. In which Shwetaparpati is specially mentioned for Urinary disorders in Sidhhayog Sangraha. It is one of the most popular formulation commonly used by practitioners. In every experimental study, only theoretical knowledge is not sufficient, it should be practically analyzed as per standard analytical procedures. Detailed procedure of Shweta Parpati Nirman is not mentioned properly in textual references. There is lack of explanation about whether the ingredients should be Ashodhit (Impure), Shodhit (Internalpurification), or Nirmalikruta (External purification). So it is very important to do the experimental study on such unexplained pharmaceutical procedure. This study is a humble effort to establish the standard operating procedure for Shweta Parpati nirman by using Ashodhit, Shodhit & Nirmalikruta ingredients.

Keywords
Shweta Parpati Nirman, Kshar Parpati, Kalmisora, Shital parpati
INTRODUCTION

Rasashastra is the science of herbs & mineral preparations associated with applied pharmaceutical procedures which is based on experimental studies. There are various forms of Ras-aushadhi nirman. One of the most popular form is Parpati kalpana nirman. The superposition of Parpati kalpna over other preparations is that the required dose is minimum, where as the effect is maximum. All these are essential characters of a good pharmaceutical index. It is also called as Pot Bandha, i.e. 8th Bandha of Parad. Most of parpati kalpna consists of Parad (Mercury) & Gandhak (sulfur), but some are prepared without using Parad & Gandhak. In which Shwetaparpati is specially mentioned for Urinary disorders in Sidhhayog Sangraha. It is also called as Shital Parpati, Kshar Parpati, Vajra Kshar, as its all ingredients are Kshariya i.e. Alkaline in nature.

In every experimental study, only theoretical knowledge is not sufficient, it should be practically analyzed as per standard analytical procedures. Detailed procedure of Shweta Parpati nirman is not mentioned properly in textual references. There is lack of explanation about whether the ingredients should be Ashodhit (Impure), Shodit (Internal purification), or Nirmalikruta (External purification). So it is very important to do the experimental study on such unexplained pharmaceutical procedure. Comparative Physical analysis of final product prepared by above three methods is also helpful for discovering the standard operative procedure for Shweta Parapatni nirman. This study is a humble effort for the same.

Shodhan is a process of purification of drug. It can be divided in two parts, one is external i.e. Physical purification and another is internal i.e. Chemical purification. Nirmalikaran is one of the important procedure of external purification of Rasadravyas which is specially mentioned in classical text book of Rasashastra that is Rasatarangini mainly for three dravyas Kalmisora, Tankana, & Tutha.

AIM

To Prepare Shweta Parpati by using Ashodhit , Shodhit & Nirmalikruta ingredients.

OBJECTIVES

1. To review the literature of Shweta Parpati & its ingredients in Ayurveda classics.
2. To prepare *Shweta Parpati* by using *Ashodhit* ingredients.
3. To prepare *Shweta Parpati* by using *shodhit* ingredients.
4. To prepare *Shweta Parpati* by using *Nirmalikrutha* ingredients.
5. To do the Physical Analysis of the *Shweta Parpati* prepared by above three methods

**MATERIALS**

This session includes literary review of

a) *Shwetaparpati*  
b) *Kalmisora*  
c) *Kankshi*  
d) *Navsagar*.


*Shweta Parpati*¹ - It is white coloured *parpati* devoid of Parad & Gandhak, specially acting on *Mootravaha Sansthan*. It is mentioned in Sidhayoga Sangraha, a classical ayurvedic text. It is also called as *Shital Parpati, Kshar Parpati, Vajra Kshar*, as its all ingredients are *Kshariya* i.e. Alkaline in nature¹.


*Dose:* 725mg to 1.250gm , *Anupan:* Cold water and Coccconut water ².

**b) Literary review of Kalmisora** *(Nitrate of Potash)*²

It is described under *Kshar vidnyaniya* specially in Rastarnngini text, having chemical formula-KNO₃.(Pottassium nitrate)

**Physical properties**

It is needle shaped, white to dirty gray coloured crystalline powder of ionic salt of Potassium nitrate. It is also called as *Surya kshar Soraka*. Molecular weight 101.102g/mol. It is soluble in water. May explode under prolonged exposure to heat or fire. It melts at 334⁰C².

**Medicinal Properties**


**c) Literature of Kankshi** *(Potash Alu)*³ –

It is described under *Uparas varga dravyas*, having chemical formula – K₂SO₄,Al₂(²SO₄)₃.24H₂O (Double sulphate of potash & Alum).

**Physical properties** - It is white coloured crystalline drug. It is soluble in water. It
melts at 92°C to 95°C. Its molar mass is 474.3884 g/mol.

**Medicinal Properties** - Ras- katu, kashaya, amla & madhur, virya- ushna, guru, snigdha, tridoshga, keshya, vishaghna, netrya, vranashodhak, stambhak, etc. & useful in Yonirog, Mukharog, Kasa, Kshaya etc. Dose- 2 to 4 ratti.

d) Literature of Navsagar –

(Ammoniumchloride)

It comes under Sadharan rasa varga dravyas, having chemical formula – NH₄Cl. It is white coloured ammonium choride powder. It is highly soluble in water. When it dissolved in water exothermic reaction occurs & water becomes chilled. It melts at 338°C. molecular weight 53.489 g/mol.

**Physical properties** - It is white coloured ammonium choride powder. It is highly soluble in water. When it dissolved in water exothermic reaction occurs & water becomes chilled. It melts at 338°C. molecular weight 53.489 g/mol.

**Medicinal Properties** - Ras- amla, lavanakshariya, shita virya, snigdha, Agni Deepak, Mutral (diuretic) sarak, pachak, tridoshagha, netrya, kapha nissarak, Vrushcchik vishanashak etc. & useful in Kasa, shwas, udar, Vrushcchik dansha, hrudaya rog, adhman, gulma, mukhashosh, pliha, kushta roga, Mutravikar etc. Dose – 2-8 ratti.

**METHODS**

Reference – Siddhyoga Sangraha

Generally *Shweta Parpati* is prepared by using Ashodhit ingredients, but *Shodhan* is important procedure to remove the impurities from the raw materials. *Nirmalkaran* is also another process of external purification mentioned for *Kalmsora in Ras tarangini* text. So in this study *Shweta Parpati nirman* was done by using following three different methods. Three samples of each method were prepared.

1. Method I- Ashudha Ingredients
2. Method II – Shodhit Ingredients
3. Method III - Nirmalikruta Ingredients

1) **METHOD I** - *Shweta Parpati nirman* by using *Ashodhit* Ingredients

**Ingredients** - As shown in Table no 1.

**Table 1** - Method I - Ingredients

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Ingredients</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ashodhit Kalmisora 16 gm</td>
<td>16 gm</td>
<td>16 gm</td>
<td>16 gm</td>
</tr>
<tr>
<td>2</td>
<td>Ashodhit Kankshi 02 gm</td>
<td>02 gm</td>
<td>02 gm</td>
<td>02 gm</td>
</tr>
<tr>
<td>3</td>
<td>Ashodhit Navasadar 01 gm</td>
<td>01 gm</td>
<td>01 gm</td>
<td>01 gm</td>
</tr>
</tbody>
</table>

**Equipment required:** Weighing machine, Mortal pestle, Pan, Spoon, Gas stove, Pyrometer & air tight jar.

**Procedure:**

- All ingredients were weighed accurately.
- Fine powder of each drug was done individually.
All ingredients were ground well in mortal and pestle to get the homogenous mixture.

- Powdered mixture was heated in pan to get liquid form of the drug.
- Temperature & Observation was recorded with pyrometer.
- The liquid mixture is thrown on clean tiles vigorously, to get the thin shield of Shweta Parpati.
- Final product was weighed, stored in air tight container & subjected to physical analysis

**Method II – Shweta Parpati nirman by using Shodhit Ingredients.** This method consists of following two steps

a. **Shodhan procedure of Kalmisora, Kankshi & Nausagar**
   - **Kalmisora Shodhan:** Reference – Rastarangini
     - Procedure: Shodhan of Kalmisora done by giving three bhavana of Ellaichi Hima.
   - **Kankshi Shodhan:** Reference – Rasatarangini
     - Procedure: It is done by heating the powder of ashudha Kankshi in pan, upto evaporation of all liquid to get shudhha kankshi.
   - **Nausagar Shodhan:** Reference – Rastarangini
     - Procedure: Powder of ashudha Nausagar was added in 3 times of cold water. The mixture was filtered & heated to evaporate the water to get shodhit Nausagar.

<table>
<thead>
<tr>
<th>Sr.no</th>
<th>Ingredients</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shodhit Kalmisora</td>
<td>16 gm</td>
<td>16 gm</td>
<td>16 gm</td>
</tr>
<tr>
<td>2</td>
<td>Shodhit Kankshi</td>
<td>02 gm</td>
<td>02 gm</td>
<td>02 gm</td>
</tr>
<tr>
<td>3</td>
<td>shodhit Navasadar</td>
<td>01 gm</td>
<td>01 gm</td>
<td>01 gm</td>
</tr>
</tbody>
</table>

**b) Parpati Nirman**

**Ingredients:** – As shown in Table no. 2

**Procedure:**
- All procedure was done same as method I.
- Final product was weighed, stored in air tight container & subjected to physical analysis.

**3. Method III - Shweta Parpati nirman by using Nirmalikruta Ingredients.** This method consists of following two steps.

a. **Nirmalikaran of Kalmisora, Kankshi & Nausagar**
b. Parpati Nirman

a. Nirmalikaran of Kalmisora, Kankshi & Navsagar

Reference: Rastarangini

Nirmalikaran of Kalmisora:

Procedure - Nirmalikaran of Kalmisora was done as per given in Rastarangini text³.

Hot water method:

Ingredients:
- Impure Kalmisora - 20 grams
- Hot water  - 60 ml

Procedure:
1) Hot Water was added in fine powder of Kalmisora to get dissolved solution.
2) The solution then allowed filtering through filter paper in a stainless steel vessel.
3) Filtered solution was allowed to cool at room temperature in a dish³.

Nirmalikaran of Kankshi:

Nirmalikaran of Kankshi was not mentioned in textual references but to achieve the uniformality in procedure, Nirmalikaran of kankshi was done.

Procedure:-
- The powdered Kankshi was added in three times of water i.e. up to complete dissolution.
- The dissolved solution is filtered & subjected to heat to get semisolid mixture
- Semisolid mixture is dried at room temperature to evaporate excess moisture.
- Nirmalikruta dried powder of Kankshi obtained.

Nirmalikaran of Navsagar:

Principles of shodhan process of Navsagar is same as Nirmalikaran i.e. Dissolution, Filtration & Evaporation, only it is titled as a Shodhan process in textual references. So Nirmalikaran of Navsagar was done as per mentioned method II.

Table 3 - Method III - Ingredients

<table>
<thead>
<tr>
<th>Sr no.</th>
<th>Ingredients</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nirmal Kalmisora</td>
<td>16 gm</td>
<td>16 gm</td>
<td>16 gm</td>
</tr>
<tr>
<td>2</td>
<td>Nirmal Kankshi</td>
<td>02 gm</td>
<td>02 gm</td>
<td>02 gm</td>
</tr>
<tr>
<td>3</td>
<td>Nirmal Navsadar</td>
<td>01 gm</td>
<td>01 gm</td>
<td>01 gm</td>
</tr>
</tbody>
</table>

b. Parpati Nirman

Ingredients: As shown in Table no.3

Procedure
- All procedure was done same as method I.
- Final product was weighed, stored in air tight container & subjected to physical analysis.

OBSERVATIONS & RESULTS
- Weight of Samples in grams - As shown in Table no. 4
- Weight Chart (Before, After and Loss) – As shown in Graph no. 4

**Table 5**- Physical Analysis of Method I - Shweta Parpati Prepared by Ashodhit Ingredients

<table>
<thead>
<tr>
<th>Panchendriya parikshan</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shabda</td>
<td>Kat Kat</td>
<td>Kat Kat</td>
<td>Kat Kat</td>
</tr>
<tr>
<td>Sparsha</td>
<td>Mrudu</td>
<td>Mrudu</td>
<td>Mrudu</td>
</tr>
<tr>
<td>Rupa</td>
<td>Shweta varna</td>
<td>Shweta varna</td>
<td>Shweta varna</td>
</tr>
<tr>
<td>Rasa</td>
<td>Kshariya</td>
<td>Kshariya</td>
<td>Kshariya</td>
</tr>
</tbody>
</table>

- Physical Analysis of Method II - Shweta Parpati Prepared by Shodhit Ingredients - As shown in Table no.6

- Physical Analysis of Method III - Shweta Parpati Prepared by Nirmalikruta Ingredients - As shown in Table no.7

- Temperature pattern wise observations by using pyrometer, during Shweta Parpati procedure- As shown in Table no.8

- Temperature required for total melting - As shown in Graph no 2

- pH Analysis of Shweta Parpati – As shown in Table no 9 and Graph no 3

**Table 4 - Weight of Samples in grams**

<table>
<thead>
<tr>
<th>S.no</th>
<th>Method</th>
<th>Sample 1 wt in gms</th>
<th>Sample 2 wt in gms</th>
<th>Sample 3 wt in gms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>A</td>
<td>L</td>
</tr>
<tr>
<td>1</td>
<td>I - Ashodhit Ingredients</td>
<td>19gm</td>
<td>12.5gm</td>
<td>6.5gm</td>
</tr>
<tr>
<td>2</td>
<td>II - Shodhit Ingredients</td>
<td>19gm</td>
<td>16gm</td>
<td>3gm</td>
</tr>
<tr>
<td>3</td>
<td>III - Nirmalikruta Ingredients</td>
<td>19gm</td>
<td>15gm</td>
<td>4gm</td>
</tr>
</tbody>
</table>

**Table 6**- Physical Analysis of Method II - Shweta Parpati Prepared by Shodhit Ingredients

<table>
<thead>
<tr>
<th>Panchendriya parikshan</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shabda</td>
<td>Kat Kat</td>
<td>Kat Kat</td>
<td>Kat Kat</td>
</tr>
<tr>
<td>Sparsha</td>
<td>Eshat Kathin</td>
<td>Eshat Kathin</td>
<td>Eshat Kathin</td>
</tr>
<tr>
<td>Rupa</td>
<td>Eshat-pitabh Shwetavarna</td>
<td>Eshat-pitabhShweta</td>
<td>Eshat-pitabh Shwetavarna</td>
</tr>
</tbody>
</table>
Table 7 - Physical Analysis of Method III - Shweta Parpati Prepared by Nirmalikruta Ingredients

<table>
<thead>
<tr>
<th>Panchendriya parikshan</th>
<th>Sample A</th>
<th>Sample B</th>
<th>Sample C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shabda</td>
<td>Kat Kat</td>
<td>Kat Kat</td>
<td>Kat Kat</td>
</tr>
<tr>
<td>Sparsha</td>
<td>Mrudu</td>
<td>Mrudu</td>
<td>Mrudu</td>
</tr>
<tr>
<td>Rupa</td>
<td>Eshat-pitabh Shweta vara</td>
<td>Eshat-pitabh Shweta vara</td>
<td>Eshat-pitabh Shweta vara</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rasa</th>
<th>Kshariya</th>
<th>Kshariya</th>
<th>Kshariya</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gandha</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8 - Temperature pattern wise observations by using pyrometer, during Shweta Parpati procedure

<table>
<thead>
<tr>
<th>Method</th>
<th>Sample</th>
<th>Temperature wise observation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Melting start at temp.</td>
</tr>
<tr>
<td>I (Ashodhit)</td>
<td>Sample 1</td>
<td>132°C</td>
</tr>
<tr>
<td></td>
<td>Sample 2</td>
<td>119°C</td>
</tr>
<tr>
<td></td>
<td>Sample 3</td>
<td>125°C</td>
</tr>
<tr>
<td>II (Shodhit)</td>
<td>Sample 1</td>
<td>129°C</td>
</tr>
<tr>
<td></td>
<td>Sample 2</td>
<td>124°C</td>
</tr>
<tr>
<td></td>
<td>Sample 3</td>
<td>120°C</td>
</tr>
<tr>
<td>III (Nirmalikruta)</td>
<td>Sample 1</td>
<td>65°C</td>
</tr>
<tr>
<td></td>
<td>Sample 2</td>
<td>81°C</td>
</tr>
<tr>
<td></td>
<td>Sample 3</td>
<td>62°C</td>
</tr>
</tbody>
</table>

Table 9 pH Analysis of Shweta Parpati

<table>
<thead>
<tr>
<th>Method</th>
<th>I- Ashodhit</th>
<th>II- Shodhit</th>
<th>III- Nirmalikruta</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH value</td>
<td>8.36</td>
<td>7.67</td>
<td>6.26</td>
</tr>
</tbody>
</table>

![Graph No. – 2 Temperature required for total melting](Image)

**DISCUSSION**

*Ras shastra* is a branch of herbomineral preparation so deep theoretical and practical
knowledge of pharmaceutical procedure like Shodhan, Maran etc is required. Most of Ras Kapla’s consists of Parad and Gandhak, but Shweta parpati is a form of Parpati kalpana prepared without using Parad and Gandhak. In Siddhayog sangraha, Shwetaparpati is mentioned as one of most important drug of choice for Urinary disorders\(^1\). In textual reference, procedure of Swetaparpati nirman is mentioned but there is no description available about the form of raw material i.e. it should be Ashodhit, Shodhit, or Nirmalikruta. So to perform experimental study on such unexplained procedures is very important. Therefore this study was undertaken to do the experimental study on Shweta Parpati nirman by using Ashodhit, Shodhit & Nirmalikruta ingredients.

Generally Shwetaparpati is prepared by using Ashodhit ingredients but Shodhan process is most important procedure to remove impurities from drug. Shodhan process is a type of chemical purification called as internal purification whereas Nirmalikaran is a type of physical purification called as external purification. So purification procedure (shodhan & Nirmalikaran) should be done before preparation of every drug formulation. Nirmalikaran is a procedure mentioned in Ras tarangini text especially for Kalmisora, Tankan, Tutha & Ahiphen\(^3\). Amongst the raw materials of Shweta parpati, Kalmisora is a main ingredient which is in large quantity. For external purification of Kalmisora, Nirmanikaran is mentioned. And for internal purification, it should be triturated (Bhavanasanskar) with Ellaichi Hima for three times\(^4\). Raw material like Kalmisora, Kankshi & Navsagar were purchased from local market & authentification done. Shwetaparpati nirman was done as per following three methods, method I) with Ashodhit ingredients, II) with Shodhit ingredients III) with Nirmalikruta ingredients. Three samples of each method were prepared, observations & temperature was recorded time to time.

In first method all ingredients taken were Ashodhit & procedure was done as per textual reference i.e. all ingredients were ground well in mortal n pestle, then taken in pan, heated, melted & poured on clean, even surface to form a white thin shield of shweta parpati\(^1\). Sample was stored in air tight container. In the same way three samples of method I, were prepared and observation with temperature was recorded.
In second method all ingredients taken were Shodhit. Shodhan of Kalmisora was done after nirmalikaran process. Nirmalikruta Kalmisora was triturated with Ellaichi hima for three cycles of Bhavana sanskar. Kankshi shodhan was done by heating Kankshi powder in pan to total evaporation of all water content of it, to get pure shodhit Kankshi Lahi. In Navsagar shodhan three times of water is added in it and the mixture was filtered and evaporated on heat to get semisolid form. Semisolid Navsagar was dried at room temperature to get shodhit Navasagar. Rest Parpati nirman procedure was done same as in method I. Three samples of Method II were obtained & observations with temperature were recorded time to time.

In method III, Nirmalikaran of all ingredients were done. Nirmalikaran of kalmisora was done by using hot water method as per Ras tarangini text. Nirmalikaran procedure is based on three principles i.e. Dissolution, Filtration & Evaporation. So as per these three principles, Nirmalikaran of Kankshi was done, though Nirmalikaran of Kankshi was not mentioned in any textual references. But to achieve the uniformity in procedure Nirmalikaran of Kankshi was done. There is a difference in Shodhan & Nirmalikaran process of Kankshi. In Nirmalikaran total water content of Kankshi was not evaporated as like shodhan of Kankshi. In Nirmalikaran, the semisolid mixture of Nirmalikruta kankshi was allowed to dry at room temperature. In Navsagar Nirmalikaran, powder of Ashudhha Navsagar was added in 3 times of cold water. The mixture was filtered & heated to evaporate the water contents of it, to get Nirmalikruta Navsagar. Principles of shodhan process of Navsagar is same as Nirmalikaran i.e. Dissolution, Filtration & Evaporation, only it is titled as a Shodhan in textual references. Parpti Nirman was done by using Nirmalikruta ingredients same as method I. Three samples were prepared & observations with temperature were recorded time to time. All sample prepared were subjected for physical analysis, i.e Panchbhautik parikshan- Shabda , Sparsha , Roop, Rasa, & Gandha. Weight before, after, & loss in weight was analyzed, as shown in table no 4 & graph no.1. Temperature required for total melting of samples were observed & compared as shown in table no.8 & graph no2.

Results were discussed according to above observation. There was slight difference in
colour and appearance of final product i.e. *eshat pitabh shweta varna parpati* by second & third method (*Shodhit & Nirmalikruta* respectively). In first method the colour of *parpati* was bright white though ingredients used were *Ashudha*. This is one of the important observation. During the procedure melting point variations were observed and recorded in all three methods by using pyrometer. In method I (*Ashodhit*), temperature required for total melting ranges from 220\(^{0}\)c to 226 \(^{0}\)c, while in method II (*Shodhit*), temperature required for total melting ranges from 218\(^{0}\)c to 229\(^{0}\)c and in method III (*Nirmalikruta*), temperature required for total melting ranges from 167\(^{0}\)c to 208\(^{0}\)c. (as shown in table no8 & graph no 2) Above observations suggest that temperature required for total melting of method II (*Nirmalikruta*) ingredients was low as compare to method I (*Ashodhit*) and method III(*Shodhit*).

Before and after weight of each sample was done, it suggest that method II (*Shodhit*) sample showed very small loss in weight after preparation as compared to rest two methods, as *shodhit* sample contains very low amount of moisture in it, as shown in table no 4 & graph no.1. Method II *parpati* is quit hard than method I and III. Method I *Parpati* smoother than II & III.

**Graph no .1 – Weight Chart (Before, After and Loss)**
Analysis of pH shows significant difference in all samples, as shown in table no 9 & graph no 3. Method I (Ashudha) shows alkaline pH of 8.3, method II (Shodhit) shows slightly alkaline pH of 7.6, while method III (Nirmalkruta) shows pH of 6.2. This variation of pH shows that Shweta Parapati prepared by method I (Ashudha) was most Alkaline in nature as compare to other methods, and method III (Nirmalkruta) was least alkaline Shwetaparapati. As Shwetaparpati was being used as alkaizer in Burning micturation it should be prepared by method I (Ashudha) for getting best alkaizer efficacy. This is a very important finding observed during this study. So may be because of this reason Shwetaparapati was being prepared by using Ashodhit ingredients.

A) Ashudha Ingredients

B) Method I – Procedure (melting)

C) Method I Shweta parpati

D) Shodhit Ingredients

E) Method II – Procedure (melting)

F) Method II Shweta parpati
CONCLUSION

1. This research work concludes that Shweta Parpati nirman by all three methods i.e. using Ashodhit, Shodhit & Nirmalikruta ingredients could be possible.

2. Shwetaparpati Nirman by Method II & III was time consuming procedure as compared to method I (Ashodhit).

3. Temperature required for all samples was near about same i.e. there was non-significant difference in temperature required for all methods. Temperature required for total melting of all sample ranges from 167°C to 229°C. It suggests that maximum temperature required for total melting of Shwetaparpati was in between 167°C to 229°C.

4. Colour of sample changes according to method of preparation i.e in method I – Shweta varna (white colour) and in II & III it was eshat pita shweta varna (yellowish colour).

5. There is very small loss in weight of Parpati in Method II (Shodhit) as compared to method I & III.
6. Method II Parpati was quit hard than method I and III. Method I Parpati smoother than II & III.

7. Analysis of pH shows significant difference in all samples. Method I shows alkaline Ph of 8.3, method II shows slightly alkaline ph of 7.6 , while method III shows ph of 6.2. This variation of ph shows that Shweta parapati prepared by method I (Ashudha) was most Alkaline in nature as compare to other methods, and method III (Nirmalikruta) was least alkaline Shwetaparapati.

8. So finally this research work concludes that, as Shwetaparpati was being used as alkalizer in Mutravikar like Mutra daha (Burning micturation), it should be prepared by method I (Ashudha) for getting best alkalizer efficacy.

This work is not a complete research work, one can do the further chemical analysis of all samples and evaluate which method is best standard operating procedure for Shweta parpati Nirman.
REFERENCES