

**SAMANYA SHODHANA OF RAW VANGA BY DHALANA METHOD WITH SPECIAL REFERENCE TO RASTARANGINI: PHARMACEUTICO-ANALYTICAL STUDY FROM ASHVIN RURAL AYURVED COLLEGE, MANCHIHILL, SANGAMNER, MAHARASHTRA****Supriya A. Giri¹, Ravindra Atram², Smita Kolte³, Sanjeev Lokhande⁴**

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**ABSTRACT**

Background: *Shodhana* is a process which separate mala by doing *Peshana, Khalana, Mardana, Dhalana, Nirvapana, Swedhana* etc. **Objective:** To study the physical, chemical changes in raw *Vanga* before and after *Samanya Shodhana*. **Materials & Methods:** In the present study, *Vanga Shodhana* is carried out by *Dhalana* method in different media as *Taila, Takra, Gomutra, Aranala, Kulattha Kwatha* for 7 times. **Results and Conclusions:** Physical changes take place in metal useful for further process. Removal of zinc and lead from the raw *Vanga* shows the importance of *Malavicchhedana* property of *Shodhana*. *Vanga* undergoes the oxidation as a chemical change which quickens the further process of *Jarana and Marana*

Keywords: *Vanga, Shodhana, Pharmaceutico-analytical and Rastarangini.*

INTRODUCTION

"Rasashastra" is a branch of Ayurveda which deals with the usage of various minerals by their identification, purification, incineration etc. For the therapeutic usage of minerals, Ayurvedic classics describe several methods to facilitate the processing of the raw minerals, and Shodhana is one among them. During Shodhana, minerals are processed in stipulated manner and brought into refinement. The process of Shodhana is carried out to remove the impurities and convert them best suitable for further therapeutic use.¹

Vanga is one of the Puti Lohas was known to ancient Indian physicians by the name of Trapu.² Formula-

tions of 'Vanga' are variously beneficial in diseases such as: Prameha, Kasa, Shwasa, Krimi, Ksaya, Pandu, Pradara, etc. Singly or in combination with other Puti Lohas, it is beneficial in disorders of the Genito Urinary Tract.^{3,4}

Ashuddha Vanga causes kusta, kilasa, Gulma, Prameha, Moha & Vanga shodhita cures all the above said diseases. Shodhana is a process which separate mala by doing Peshana, Khalana, Mardana, Dhalana, Nirvapan, Swedhana etc.⁵

शोधन परिभाषा (श्लोक):

उदयिष्टैरौषधैः सार्द्धं क्रियते पेषणादिकम्।
मलविच्छिन्नतये यत्तु शोधनम् तदिहोच्यते॥

-रसर २ ५२

Various studies has been undertaken for the study of Vanga Marana, but it is necessary to establish the relative difference in qualities acquired by Vanga when subjected to different types of shodhana & also evaluate the effect of Shodhana Karma.

Though there are number of Shodhana vidhi's are advocated in classical texts. The present study was conducted with following aims and objectives.

Aim: Samanya shodhana is carried out to remove the impurities of raw Vanga and convert it best suitable for further therapeutic use with special reference to Rastarangini.

Objective of the study

- Study the organoleptic characters before and after Vanga shodhana

तैले त्क्रे गवांमूत्रे ह्यारनाले कुलत्थजे । क्रमान्निषेचयेत् तप्तं द्रावे द्रावे तु सप्तधा ॥ स्वर्णादि लोहपत्राणां शुद्धिरेषा प्रशस्यते ॥ -रसरत्नसमुच्चय ५/१३).

Method- Samanya Shodhana: Vanga with definite quantity measured and taken in Darvi Yantra, it was melted in Madyamagni, it was carefully poured in to the Pitara Yantra containing Tila Taila, the process is

- Study the physical properties before and after Vanga shodhana
- Study the chemical properties before and after Vanga shodhana

Materials & Methods:

Place of study & duration of study: Necessary processing of raw materials and preparation was carried out in Pharmacy section, Rasashastra and Bhaishajyalkalpana Dept at Ashvin Rural Ayurvedic College, Manchi Hill, Sangamner district Ahmednagar & chemical test was done by Atomic absorption spectroscopy (AAS) at Geology Department, Savitribai Phule Pune University, Pune. Study was conducted from 2014 to 2015

repeated for 7 times. Same procedure was carried out with Takra, Gomutra, Aranala, and Kulattha Kwatha for 7 times in each media. (Figure 1)

Results:

A. Organoleptic characters:

Table 1: Organoleptic Characters before and after *samanya shodhana* on raw *Vanga*

	Colour		Taste		Smell		Touch		Sound	
	BSS	ASS	BSS	ASS	BSS	ASS	BSS	ASS	BSS	ASS
Medias	BSS	ASS	BSS	ASS	BSS	ASS	BSS	ASS	BSS	ASS
<i>Tila Taila</i>	Sil	Sil	NT	NT	NS	NS	RI	Sm	M	M
<i>Takra</i>	Sil	Dslb	NT	NT	NS	ST	Sm	R/P	M	M
<i>Gomutra</i>	Dslb	Brsilb	NT	NT	ST	SG	R/P	R/P	M	M
<i>Aranala</i>	Brsilb	Brsilb	NT	NT	SG	NS	R/P	R/P	M	M
<i>Kulattha Kwatha</i>	Brsilb	Brsilb	NT	NT	NS	SKK	R/P	R/p	M	M

BSS-Before Samanya Shodhana, **ASS**-After Samanya Shodhana, **Dslbt**- Dull silvery lusture with blackish tinge, **Brsilb**-Bright silvery lusture with blackish tinge, **NT**- No teste, **NS**- no specific smell, **Sm**- Smooth, **ST**, **SG**, **SKK**- Smell of Takra, Gomutra, Kulattha Kwatha, **respectively**, **M**-Metallic

B. Physical properties:

Table 2: Shows the percentage weight lost before and *after Samanya shodhana*

	Weight in gm		Weight lost in gm (in %)
	BSS	ASS	
Medias	BSS	ASS	
<i>Tila Taila</i>	922.2	866.9	55.3 (5.9%)
<i>Takra</i>	816.9	805.9	11 (1.26%)
<i>Gomutra</i>	753.4	735.7	17.7 (2.06%)
<i>Aranala</i>	678.3	628.8	49.5 (5.9%)
<i>Kulattha Kwatha</i>	569.8	507.2	62.6 (7.9%)

Table 3: Physical properties before and after *Samanya shodhana*

Physical properties	Form		Shape		Melting point	
	BSS	ASS	BSS	ASS	BSS	ASS
Medias	BSS	ASS	BSS	ASS	BSS	ASS
<i>Tila Taila</i>	Solid	Solid	Irregular	RegRod	250	250
<i>Takra</i>	Solid	Mix	Reg Rod	Mixreg	230	225
<i>Gomutra</i>	Mix	Mix	Mixreg	Granular	235	230
<i>Aranala</i>	Mix	Mix	Granular	Ir Round	235	230
<i>Kulattha Kwatha</i>	Mix	Mix	Irregular Round	Regular Round	230	230

Ir-irregular, **Reg round**- regular round

C. Chemical properties:

Table 4: Chemical properties before and after *Samanya shodhana*

Chemical properties	Lead (Pb/ppm)		Zinc (Zn/ppm)	
	BSS	ASS	BSS	ASS
Medias	BSS	ASS	BSS	ASS
<i>Tila Taila</i>	0.880	0.560	0.047	0.033
<i>Takra</i>	0.560	0.250	0.033	0.026
<i>Gomutra</i>	0.250	0.330	0.026	0.019
<i>Aranala</i>	0.330	0.600	0.019	0.032
<i>Kulattha Kwatha</i>	0.600	0.230	0.032	0.024

DISCUSSION

In *Samanya shodhana*, the maximum weight lost was found with *Kulatta Kwatha* media i.e. 62.6 gm (7.9%) followed by *Taila and Aranala*. Total weight lost was found to be 21.2%. The Repetition of heating and cooling cause's disruption in compression tension equilibrium leads to increased brittleness, reduction in hardness and finally reduction in the particle size. After *Samanya shodhana* Colour and shape of *Vanga* changed.

Each *Drava* has *Vishesha guna* in exerting a new *guna* to the *Dhatu* and also helps to remove *Visa guna*. It prepares the metal to be brittle so that the process of particle size is assisted. S-adenosyl-l-methionine is one of the many important substrates which can found in all 5 dravyas of *Samanya Shodhana*. It provides an edge on the chelating of these metals making them bio friendly. Physically this process is the beginning of conversion of metal particles into nanoparticles.

CONCLUSION

Rough *raw Vanga* was changed to soft granular form in *shodhita Vanga*. Physical and structural changes take place in metal helpful for the next process. The concentration of the lead and Zinc was decreased in all observation except in *Gomutra and Aranala*.

Removal of Zinc and lead from the *raw Vanga* shows the importance of *Malavicchedana* property of *Shodhana*. *Vanga* undergoes the oxidation as a chemical change which quickens the further process of *Jarana and Marana*

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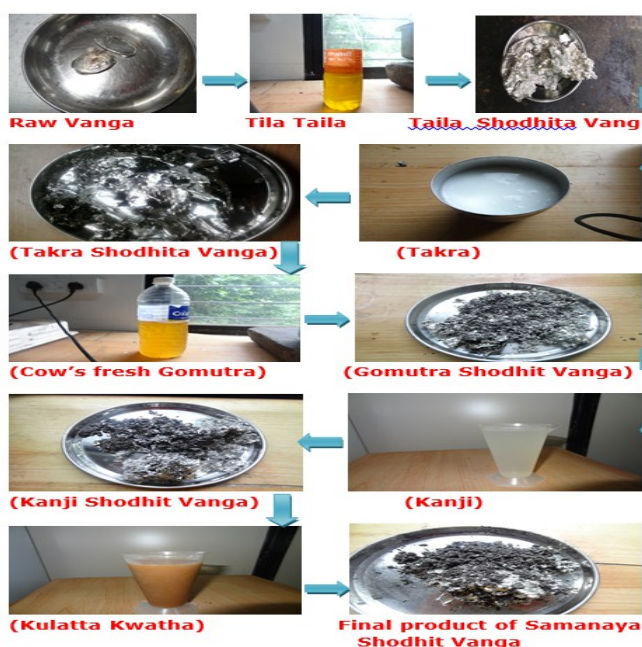


Figure 1: Show changes in raw *Vanga* before and after the procedure of *Samanya shodhana*

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