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**VISHESH SHODHANA OF SAMANYA SHODHITVANGA BY DHALANA
METHOD WITH SPECIAL REFERENCE TO RASTARANGINI:
PHARMACEUTICO-ANALYTICAL STUDY FROM ASHVIN RURAL**

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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 **Samanya ShodhitVanga** before and after *Vishesh Shodhana*

Materials & Methods: In the present study, Vanga shodhana was carried out by Dhalana method in different media in *Churnodhaka (7 times), Suryadugdha (7 times), Amla Takra and Kumari Swaras (3 times)*. **Results and conclusions:** Physical changes take place in metal useful for further process.

Removal of zinc and lead from the samanya ShodhitVanga shows the importance of *Malavicchadan* property of *Shodhana.Vanga* under goes the oxidation as a chemical change which quickens the further process of *Jarana and Marana*

Key words: Vanga, Vishesh, Shodhana, Pharmaceutico-analytical and Rasatarangini.

1. 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* known to ancient Indian physicians by the name of *Trapu*.² Formulations 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 separates mala by doing *Peshana*, *Khalana*, *Mardana*, *Dhalana*, *Nirvapana*, *Swedhana* etc.⁵

शोधन परिभाषा (श्लोक):

उदयिष्टैरौषधैः सार्द्धं क्रियते पेषणादिकम्।
मलविच्छिन्नतये यत्तु शोधनम् तदिहोच्यते॥

—रसतर २ ५२

Various studies have 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: Vishesh shodhana is carried out to remove the impurities of Samanya Shodhit Vanga and convert it best suitable for further therapeutic use with special reference to Rastarangini"

2. Objective of the study

- i. Study the organoleptic characters before and after *Vanga shodhana*
- ii. Study the physical properties before and after *Vanga shodhana*
- iii. Study the chemical properties before and after *Vanga shodhana*

3. **Materials & Methods: Place of study & duration of study:** Necessary processing of raw materials and preparation was carried out in Pharmacy section, *Rasashastra and Bhaishajyakalpna* 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

Method-

Step 1: *Samanya shodhana*: *Raw 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 repeated for 7 times. Same procedure was carried out with *Takra*, *Gomutra*, *Aranala*, and *Kulattha Kwatha* for 7 times in each media (Figure 1).⁶

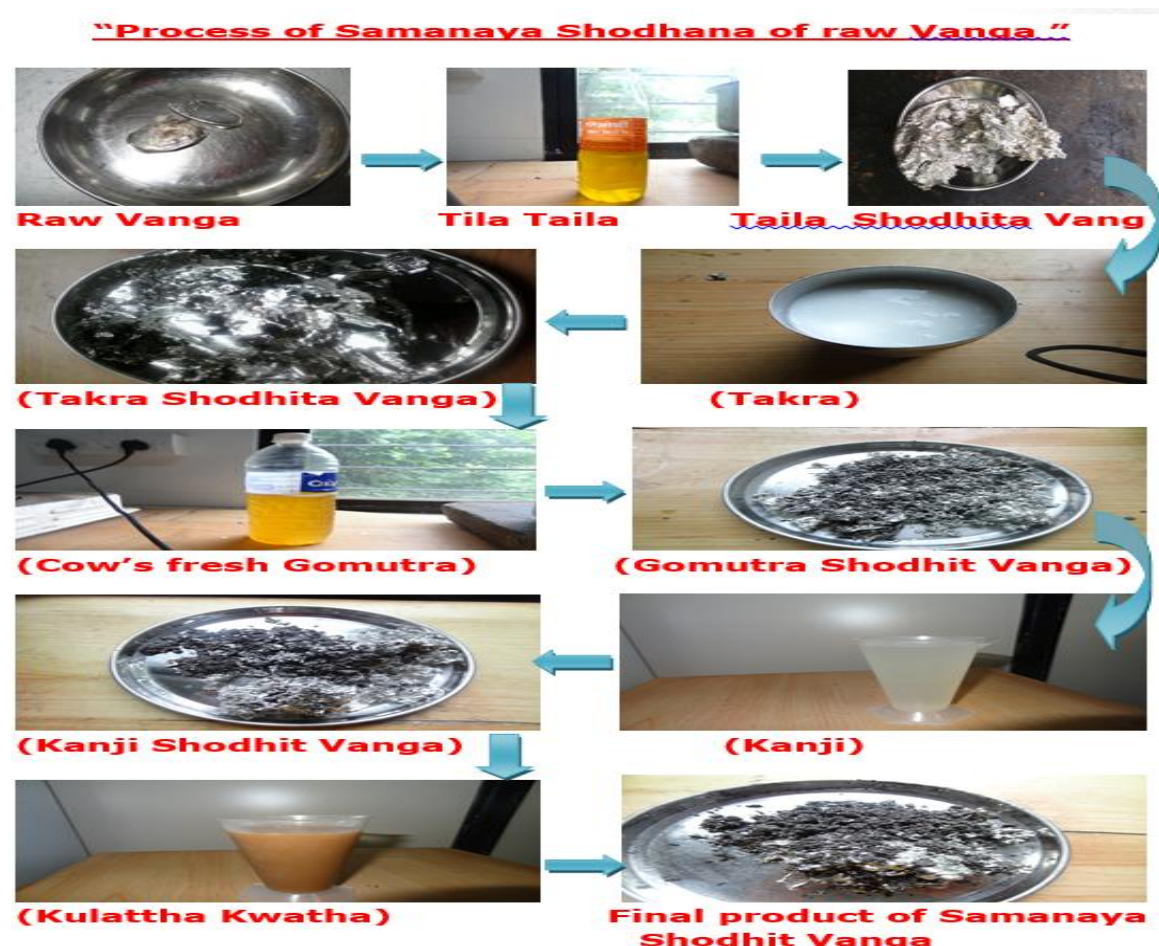


Figure 1: Show steps and changes in raw *Vanga* before and after the *Samanya shodhana*

Step 2: Samanya shodhana followed by Vishesh shodhana: In first step we had carried out Samanya shodhana (Step 1) with different Medias(as shown in figure 1)then on same sample **Vishesh Shodhana was carried out** with definite quantity measured and taken in *Darvi Yantra*, it was melted in *Madyamagni* and carefully poured in to the *Pitara Yantra* containing media of Vishesh shodhana i.e. *Churnodhaka*, *Suryadugdha* (7 times), *Sinduvara Drava* (3 times), *Haridrayukt Nirgundi Swaras* (3 times) *Amla Takra* and *Kumari Swaras* (3 times).

1) Vishesh Shodhana was carried out in **Churnodhaka for 7 times**(figure 2).⁶

खुराभिधानम् खलु शुक्रलोहम् निधाय द्रव्याम् भिषजाम् वरेण्यः। चुल्लीगतत्राप्यथ
गालयित्वा विशुद्धचूर्णोदकपूर्णगर्भे॥८॥ गाढन्तु सच्छिद्रपिधानकेन
शिपेत्समाच्छत्रमुखे तु कुम्भे। इत्थम् निषिक्तम् भिषजाश्च वारम् वड्गम्. विशुद्धि
समुपैति नूनम्॥९॥ -(रसतर. १८/८,९)⁶

“Vishesh Shodhana of Samanya shodhitha Vanga by Churnodhaka”



Figure 2: Vishesh shodhana on samanya Shodhit Vanga by Churnodhaka

2) **Suryadugdha for 7 times** (figure 3):⁶

वड्गकं गालितम् लोहं दर्वी गतम् सूर्य दुग्धे भृशञ्चैव निर्वापयेत्। पूर्वमार्गेण वै
शेषकर्माचरेत् सत्वरम् वड्गकम् याति शुद्धिम् पराम्॥ (रसतर. १८/१०)⁷



"Vishesha Shodhana of Samanya shodhitha Vanga by suryadugdha"



Figure 3: Vishesh shodhana on samanya Shodhit Vanga by Surya Dugdha

3) Haridrayukta Nirgundi Swaras for 3 times (figure 4):⁶

वङ्गकम् द्रावितम् सिन्दुवार द्रवे रात्रियुक्तं त्रिधा चेह निर्वापयेत्। शेषकर्मा चरेत् पूर्वमार्गेण वै शुक्रलोहम् द्रुतम् शुद्धिम् पराम्॥ (रसतर. १८/११)^८

"Vishesha Shodhana of Samanya shodhitha Vanga by Haridrayukta nirgundi swaras"



Figure 4: Vishesh shodhana on samanya Shodhit Vanga by Haridrayukt Nirgundi Swaras

4) Vishesh shodhana of Vanga in Amla Takra & Kumari Swaras for 3 times (figure 5):⁶

(वङ्गम् प्रद्राव्य यत्नेन लोहदर्वीगतम् ततः। निर्वापयेदम्लतक्रे पूर्वैकविधिना भिषक् ॥१३॥ ततः कुमारिका द्रावे तद्वदेव निषेचयेत् त्र्यनैन विधिना वङ्ग. शुद्धिमायाति सर्वथा ॥१४॥ (रसतर. १८/१३,१४)^९

"Vishesha Shodhana of Samanya shodhitha Vanga by Amla Takra & Kumari swarasa"

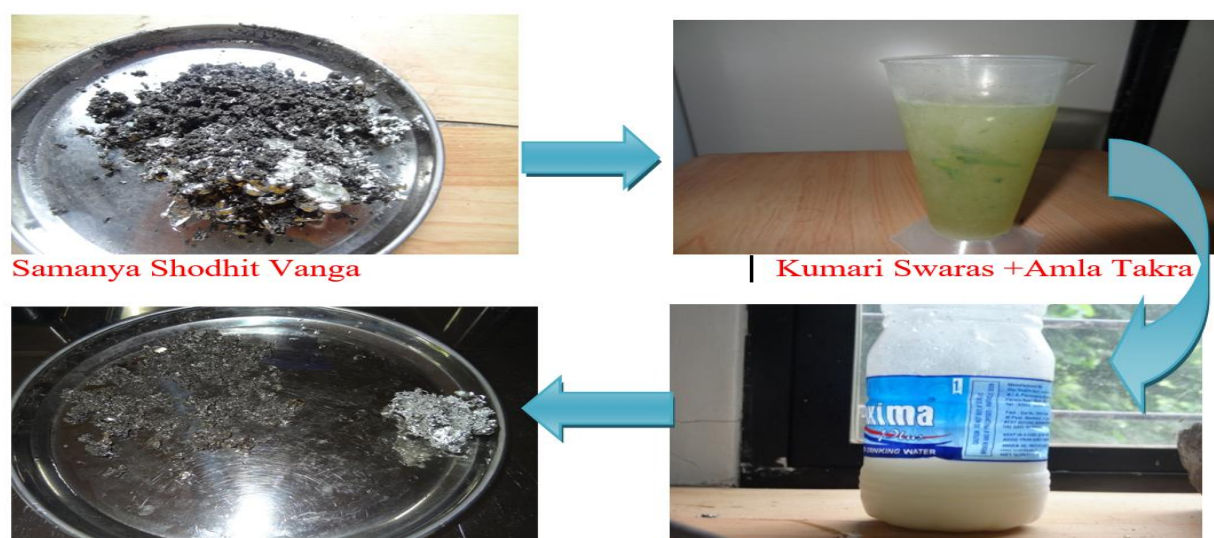


Figure 5: Vishesh shodhana on samanya Shodhit Vanga by Amla Takra & Kumari Swaras

4. Results:

a) Organoleptic characters:

Table no.1: Organoleptic Characters before and after Vishesh shodhana on samanya Shodhit Vanga

Organoleptic characters	Colour		Taste		Smell		Touch		Sound	
	BSS	ASS	BS S	ASS	BSS	ASS	BSS	ASS	BSS	ASS
Medias										
Churnodhaka	Brsilb	BSC	NT	NT	NS	NS	R/P	Sm	M	M
Suryadugdha	Brsilb	Sib	NT	NT	NS	SS	R/P	Sm	M	M
Haridrayukt nirgundi Swaras	Brsilb	SilGt	NT	NT	NS	NS	R/P	Sm	M	M
Amlatakra + Kumari Swaras	Brsilb	White Sil	NT	NT	NS	ST	R/P	Sm	M	M

Sil-silvery, BSC-Bright silvery with cement shade, Sib-silvery with Blackish tinge, SS-Smell of Suryadugdha, SS-Smooth& Sticky, SilGt-Silvery with gold tinge, ST-smell of Takra

5. Physical properties:

Table no. 2: Shows percentage weight lost before and after Vishesh shodhana on samanya Shodhit Vanga

Medias	Weight in gm		Weight lost (in %)
	BSS	ASS	
Churnodhaka	108	98.8	9.2 (8.51%)
Suryadugdha	108	101.7	6.3 (5.83%)
Haridrayukt Nirgundi Swaras	108	105.7	2.3 (2.12%)
Amla Takra + Kumari Swaras	108	87.7	20.3 (18.79%)

Table no. 3: Physical properties before and after Vishesh shodhana on samanya Shodhit Vanga

Physical properties	Form		Shape		Melting point	
	BSS	ASS	BSS	ASS	BSS	ASS
Churnodhaka	Solid	Powder	Irregular	Granular	245	240
Suryadugdha	Solid	Mix	Irregular	Granular	240	245
Haridrayukt Nirgundi Swaras	Solid	Mix	Irregular	Rd rods	240	238
Amla Takra + Kumari Swaras	Solid	Mix	Irregular	Granular	240	238

6. Chemical properties:

Table no.4: Chemical properties before and after Vishesh shodhana on samanya Shodhit Vanga

Chemical properties	Lead (Pb/ppm)		Zinc (Zn/ppm)	
Medias	BSS	ASS	BSS	ASS
Churnodhaka	0.600	0.650	0.032	0.181
Suryadugdha	0.600	0.360	0.032	0.032
Haridrayukt Nirgundi Swaras	0.600	0.320	0.032	0.014
Amla Takra + Kumari Swaras	0.600	0.210	0.032	0.010

7. Discussion:

In the present study, we found that bright silvery Colour of samanya Shodhit Vanga was changed to Bright silvery with cement shade, silvery with Blackish tinge, Silvery with golden tinge and white silvery colour was observed in the processed with Churnodhaka, Suryadugdha, Haridrayukt Nirgundi and Amlatkara + Kumari Swaras, respectively. Before Vishesh shodhana touch of samanya Shodhit Vanga was regular rough powder but after Vishesh shodhana touch was changed to smooth in all process of Vishesh shodhana. After Vishesh shodhana weight of measured Vanga was lost in all process. The maximum weight lost was found in Amlatkara + Kumari Swaras i.e. 20.3 gm (18.7%) followed by Churnodhaka 9.2 gm (8.5%).

Solid form of samanya Shodhit Vanga was changed to mix form (Powder and solid) after Vishesh shodhana. After shodhana the irregular form of Vanga changed to granular form was observed in all process except in Haridrayukt Nirgundi Swaras (small regular round rod shape)

The **maximum removal of lead** was **found** in **Vishesh shodhana** of **Samanya Shodhit Vanga** with Amla Takra i.e. 0.21/ppm. The **maximum removal of zinc** was

0.014/ppm and 0.010/ppm in **Haridrayukt Nirgundi Swaras** and Amla Takra, respectively.

8. CONCLUSION:

Rough Vanga was changed to **soft granular** form after Vishesh Shodhana. The concentration of the lead was decreased in all the observation after Vishesh shodhana on samanya Shodhit Vanga except in Churnodhaka. The concentration of the Zinc was decreased in all observation after Vishesh shodhana on samanya Shodhit Vanga except in Churnodhaka and Suryadugdha. **Removal of Zinc and lead from** the Samanya Shodhit Vanga shows the importance of **Malavicchedana** property of Vishesh Shodhana. Vanga under goes the oxidation as a chemical change which quickens the further process of Jarana and Marana

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