

COMPARATIVE PHARMACEUTICAL STUDY OF VAIKRANTA BHASMA PREPARED FROM TWO DIFFERENT SAMPLES

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ABSTRACT

Introduction: Vaikranta is one of the most important mineral mentioned in the Maharasa and Uparatna Vargas in many of the Rasa shastra texts. It is identified as various minerals and a confusion regarding the authenticity of the drug prevails even today. It is considered and accepted as Tourmaline by few authors while others opine of it being Fluorspar or Manganese. Vaikranta bhasma is considered and used as a substitute for Vajra Bhasma as it is considered to have similar therapeutic properties. Though Vaikranta Bhasma has abundant therapeutic value, it is not used extensively in clinical practice due to its availability, higher expense and the complex pharmaceutical procedure in the preparation of bhasma and also mainly difficulty to decide the correct Vaikranta. **Methodology:** It involves preparation of two samples of Vaikranta i.e., Fluorite and

Tourmaline, which were prepared by subjecting them to shodhana and marana, as mentioned in classics. **Observations and Results:** The sources of both the samples were different, the first one being Fluorite and the other black Tourmaline. Though the nature and number of Putas mentioned for the Vaikranta is 8 Gaja puta, practically the bhasma was obtained in 11 and 9 putas respectively for Fluorite and Tourmaline. The color of both bhasma were similar in color, light brownish, with mild differences in the chemical compositions. **Conclusion:** After Marana the color of both the samples of Bhasma were similar in color, composition and nature.

KEYWORDS: Vaikranta, Fluorite, Tourmaline, Maharasa, Uparatna, Shodhana, Marana.

INTRODUCTION

Rasashastra, a system of Ayurveda, is the system of medicine which first recognized the importance of metals and minerals for curing diseases. Rasashastra not only includes the field of inorganic pharmaceutical preparations, but also specifically explains how the purified (shodhita) and bhasmas of the same are to be prepared and used.

The herbo-mineral preparations, Bhasmas, are obtained by repeated calcination of metals and minerals and are compatible with the body system, the tissue cells and the normal physiology of the body. These are such forms of Ayurvedic medicines in which the bioavailability of the drug is maximum and the therapeutic efficacy is improved due to the addition of organic as well as inorganic substances during their preparation.

In the Rasashastra literature, there are controversies regarding various drugs and one among those is the mineral from Maharasa and Uparatna varga, Vaikranta, because it is represented by different minerals, which are identified as Fluorspar, Feldspar, Quartz, Tourmaline etc.

By taking into consideration the properties described in classical texts and using information from geology, gemology and mineralogy, it can infer that the mineral Fluorite is closest to be considered as Vaikranta from Maharasa varga, as it fulfills all the properties except for the Hardness and Tourmaline can be considered as the Vaikranta from Uparatna varga.

The word Vaikranta denotes “that which deforms all kinds of metallic substances”, for which the present-day mineral Fluorite is extensively utilized in the smelting of various minerals and metals from the alloys.

In the present study two varieties of Vaikranta are used for the preparation of Bhasma i.e., Purple colored Fluorite and Black Tourmaline. This study aims in developing a standard operative procedure for Bhasma preparation of two varieties of Vaikranta and identifying their organoleptic characters.

MATERIALS AND METHODS

Procurement of raw material: The authenticated black Tourmaline and Purple colored Fluorite were obtained from Gujrat.

Methods: The preparation of Vaikranta bhasma was carried out in the Department of Rasashastra and Bhaishajya Kalpana practical Lab of SJGAMC, Koppal, as per the reference mentioned in Classics of Rasaratna Samuchchaya.

Shodhana^[1]

Need^[2]: As the naturally obtained form of Vaikranta cannot be assimilated by the body in its crude form, and also the impure form of Vaikranta when administered internally leads to Kilasa (Vitiligo), Daha Roga (burning sensation), Paarshwa peeda (Back ache) and Pandu Roga (anaemia), it should be put to therapeutic use only after proper Shodhana and Marana.

Procedure: The samples of Vaikranta taken, were coarsely pounded in a clean Khalwa Yantra, and tied in to pottali, which was then suspended in the Dolayantra and subjected for Sweedana in Kulattha Kwatha for 3 hours. The Pottali was made sure to completely be immersed in the Kulattha Kwatha ensuring the bottom of the pottali was not in contact with the bottom of the mud pot. After the specified duration of Swedana, the pottali was removed, the drug was washed using hot, dried and stored in a clean air tight container.

Marana^[3]: The Marana of Vaikranta was carried out as the reference from Rasaratna Samuchchaya. It is done by adding equal quantity of Shodhita Gandhaka to the Shodhita Vaikranta, triturated with Nimbu swarasa and subjecting to 8 Gajaputas. As per the opinions given by the practitioners, the quantity of Gandhaka added here was based on the experience and guidance of the senior faculty. As the Bhasma Siddhi Lakshanas were not observed by eight putas, it was subjected to 11 putas for sample 1, and 9 putas for Samole 2.

Sample 1: 500gms of Shodhita Vaikranta and 500 gms of Shodhita Gandhaka were taken and bhavana was done iusing sufficient quantity of Nimbu swarasa. After proper bhavana, chakrikas were prepared and kept for drying. They were then placed in a sharava samputa and are subjected to put using 40 Upalas initially. After swanga sheeta, the sharava was taken out and 980 gms of the product obtained was mixed with 70 gms of Shuddha Gandhaka. Bhavana was given with Nimbu swarasa. Later, the process of making chakrikas followed by sharava samputeekarana was repeated. The second puta was given with 50 Upalas reaching a temperature of 200 °C. After swangasheeta, 850gms of the product was collected which was Blackish grey in color but brittle in consistency. During third puta, the quantity of Shodhita Gandhaka added was 200gms, followed by Bhavana with Nimbu swarasa. The process of preparation of Chakrikas and sharavasamputeekarana were repeated. Puta was given using 60 Upalas. After Swanga sheeta, the bhasma collected was Greyish in color which was darker than the bhasma obtained in second puta.

The product obtained was then processed for direct bhavana with Nimbu swarasa, chakrikas, made and sharava samputeekarna done. It was then subjected to Puta with 70 upalas. This process was carried out till the bhasma siddhi lakshanas were attained. Practically it took 11 putas for obtaining proper bhasma from sample 1, with maximum upalas being used are 300 reaching a temperature of 700-degree Celsius. The smell of Gandhaka was appreciated during the initial process of Bhavana which later was by Nimbu swarasa. The same procedure was followed for the Sample 2 of Vaikranta in the study. However, the number of putas given to sample 2 of Vaikranta was 9, after which the Bhasma siddhi lakshanas were appreciated (Table 2).

OBSERVATIONS AND RESULTS

Temperature throughout the procedure of Shodhana was maintained at 100°C. Frothing was seen at the surface of the liquid during the process which was timely removed and the liquid media maintained in quantity when the level of Kulattha Kwatha in Dolayantra reduced. By the end of Shodhana process no difference was found in the quantity of the end product in both the samples.

During Marana, mardana of about 7-8 hours was required to obtain the consistency for the preparation of Chakrikas. During the trituration, grittiness was appreciated in the initial stages which reduced in subsequent bhavanas. The temperature for puta was gradually increased by using minimum number of Upalas in the beginning. The temperature was then maintained in the last 5 putas for Sample 1 and Sample 2. IT took overall 11 Putas for the Sample 1 and 9 putas for sample 2 to reach proper Bhasma lakshanas. Loss in the products and change in color were appreciated in succeeding puta as mention in the Table number 1 and 2. The fineness also increased with the progressing putas.

Table no. 1: Observations during vaikranta marana procedure (Sample 1).

Putra	Quantity of Vaikranta (in gms)	Quantity of Gandhaka (in gms)	Quantity of Nimbu Swarasa (in ml)	Weight before puta (in gms)	Weight after puta (in gms)	Number of upalas used	Temp. (in degree Celcius)	Observations
1	500	500	650	1050	980	40	170	Hard lumps adhering to sharava along with powdery bhasma was obtained,

								blakish in color, Smell of Gandhaka along with shiny particles
2	980	70	600	1100	850	50	200	Blackish mixture obtained, smell of nimbu swarasa over powered Gandhaka, fine consistency of the mixture noted.
3	850	200	650	1100	750	60	250	Blackish grey mixture obtained, finer in touch, easy to powder and dominant smell of gandhaka
4	750		300	800	650	70	300	Greyish homogenous mixture, turned black on addition of Nimbu swarasa, forms fine paste by the end of Bhavana
5	650		250	660	620	100	400	Ash color powder with slight orangish tinge,
6	620		200	630	615	200	580	Greyish orange chakrikas, difficult to powder into fine form, turned black

								on addition of Nimbu swarasa
7	615		200	620	550	300	700	Orangish white powder, turned redish orange in color when nimbu swarasa is added
8	550		175	555	516	300	700	Light pink color powder, with no smell and taste, shining particles present
9	516		170	516	486	300	700	Light pink powder, smooth and sticky in consistency
10	486		150	488	450	300	700	Almond color powder obtained
11	450		150	455	437	300	700	Almond color powder obtained

Table no. 2: Observations during vaikranta marana procedure (Sample 1).

Putra	Quantity of Vaikranta (in gms)	Quantity of Gandhaka (in gms)	Quantity of Nimbu Swarasa (in ml)	Weight before puta (in gms)	Weight after puta (in gms)	Number of upalas used	Temp. (in degree Celcius)	Observations
1	500	500	750	1012	954	40	170	Hard lumps adhering to sharava along with powdery bhasma was obtained, blakish in color, Smell of Gandhaka along with shiny particles

2	954	46	600	1000	896	70	300	Blackish shiny mixture obtained, Easy to triturate as compared to 1st bhavana, smell of Nimbu swarasa was more appreciated than Gandhaka
3	896	104	600	1012	753	100	400	Blackish green mixture,
4	753		450	760	654	200	590	Light Brown color
5	654		360	670	568	300	700	Light Brown color
6	568		250	575	498	300	700	Brick Colored
7	498		200	500	432	300	750	Brick Colored
8	432		150	440	420	300	700	Mud brown color
9	420		145	425	417	300	700	Mud brown color

DISCUSSION AND CONCLUSION

Vaikranta, the second Maharasa mentioned by Rasavagbhata is identified as Tourmaline, Fluorite and Manganese by various authors. Late Dr Vaman Ganesh Desai author of Bharatiya Rasa Shastra considers Vaikranta as Fluorspar. Prof. D A Kulkarni commentator of Rasa Ratna Samuchchaya supports Fluorspar as Vaikranta. Few others consider Vaikranta of Maharasa group as Manganese, and of that Uparatna variety as Tourmaline or Fluorspar. In Rasa Hridaya tantra the satwa of Vaikranta is said to be Loha. Later the commentator mentions here in this context as Rasa Vaikranta which can be different Vaikranta. And satwa of it is Lohanibha or Munda nibha. Therefore, Manganese on smelting gives Cast Iron so it is this Vaikrant as Manganese. Chanakya of Arthashastra mentions Kakanda bhurja varno va Vaikranta dhatu, which further is explained as Vaikranthakhya Loha vishesha yonirdhatuh. This means according to Chanakya Vaikranta is a type of metal dhatu. Acharya Yadavji Trikamji opines that the Uparatna Vaikranta is Tourmaline which can be used as substitute to

Diamond. Rasarnava opines that the satwa of Vaikranta is Indragopa vat i.e., Red color. According to few authors including Ayurveda Prakasha say that Shankha Kundendu sankasham satwam Vaikrantajam bhavet i.e., the satwa is white in color. Also in Ayurveda prakasha it is told as the Vikruta vajra khanda as Vaikranta and the shodhana, marana etc., as Vajra only. So, such opinions have lead to great controversy as the substance of Vaikranta. A commentator of Rasahridaya Tantra states that it is Vajrabhumi raja suggesting it is the dust of Vajrabhumi with Kimberlite rock- so there are six items under the heading of Vaikranta. Fluorite has many metallurgical uses around 50% of fluorite produces is consumed in basic open hearth process of making steel. It facilitates fusion and transfer of objectionable impurities such as sulphur and phosphorus into slag and gives fluidity to the slag, its also used in electrical furnace, ferroalloy and alloy steels producing nickel, monel metal brass smelting of gold silver, lead and copper as well as in refining copper lead and antimony.

Properly prepared vaikranta bhasma mitigates all the three vitiated doshas.^[4,5]

- It possesses all the six rasa.
- Its judicious administration provides the physical strength and makes the body strong and healthy.
- It cures pandu roga (anemia), udara roga (abdominal diseases), jirna jwara (chronic fever), nava jwara (first stage of fever), shwasa (bronchial asthma), kaasa (cough), kshaya roga (tuberculosis), prameha roga (diabetes mellitus).
- By consuming vaikranta bhasma maha roga gets cured.
- Increases medhashakti (memory).
- Cures the chronic agni mandhaya (reduced appetite).
- When swasthya (healthy person) consumes it produces uttama rasayana gunas.
- It is also mixed with various other bhasmas to increase its therapeutic efficacy.
- It is equivalent in efficacy to vajra bhasma.
- It is uttama twachya (good for skin) and rajayakshma nashaka (cures tuberculosis).
- It is a good rejuvenate.
- It cures shosha (emaciation), jwara (fever), kushta (skin ailments), pandu (anemia), udara (ascitis), swasa (bronchial asthma), kasa (cough), prameha (diabetes mellitus), shwayathu (elevation on the surface of skin) etc.
- It enhances the body power.

REFERENCES

1. Vagbhata, Rasaratna Samucchaya, Siddhiprada Hindi Translation of Siddhinandan Misra, Varanasi: Chaukhabhaorientalia, 2011; 40: 697.
2. Sri Madhavacharya, Shri Gulrajsharma Mishra, Ayurved-Prakasha, Varanasi, Chukamba Bharati Academy, 2007; 5: 168 – 480.
3. Vagbhata, Rasaratna Samucchaya, Siddhiprada Hindi Translation of Siddhinandan Misra, Varanasi: Chaukhabhaorientalia, 2011; 41: 697.
4. Sharma sadanand, Kashinathshastri, Rasa Tarangini, Varanasi, Motilal Banarasidas Publications, 2014; 23, 11: 1167 – 169, 636.
5. Vagbhata, Dr. Indra Dev Tripathi, Rasa Ratna Samucchya, Varanasi, Sanskrit Sansthan Publication, 2009; 16: 2 – 62.