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## Conceptual Review of Abhraka (Biotite) - An Ayurvedic View



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### ABSTRACT

Since *Vedic* period, *Ayurveda* is in common medical system of medicine in Asian subcontinent predominantly in India. It is science of life. *Ayurveda* is at verge of global acceptance due to its holistic approach of well being for human kind. It deals chiefly with mineral/metal processing for therapeutic purposes. Many minerals and metals were known to the Indians since the pre-*vedic* period. *Abhraka* is one among them which is in use since *long back*. It is placed in *maharasa varga* in *Ayurvedic* pharmaceuticals. *Abhraka* has various therapeutic uses. In this review article an attempt has made to explore the wide range of description of *Abhraka* available in *ayurveda*.



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## INTRODUCTION

The branch of *Ayurveda* which deals with the pharmaceutical processing of drugs is known as *Rasa Shastra*. It explains mainly with the manufacturing of drugs for therapeutic purposes. Animal, herbal, metal, mineral and aquatic origin drugs are mainly described in *ayurvedic* pharmaceuticals. Many minerals and metals were known to the Indians since the pre-*vedic* period. Copper, gold, *biotite*, iron, lead and tin were identified in *vedic* era. During ancient time physicians were using medicines mainly of vegetable origin. Use of metals and minerals for medicinal purposes was in the primitive stage. But the metals and minerals are in the use for the welfare of the human beings, since dawn of the civilization. These metals were used for preparing the domestic appliances, hunting tools etc. During their use people discovered their medicinal values<sup>1</sup>. This knowledge increased gradually and developed extensively by *Acharya Nagarjuna* (6<sup>th</sup> to 8<sup>th</sup> AD.). He made innovations in the field of pharmaceuticals, therapeutics & alchemy. Since then this branch is being recognized as *Rasa Shastra*, which later on merged into basic health science *Ayurveda*. In *Rasa* literatures, minerals have been given much importance for therapeutics and alchemical purposes.

Raw materials of drugs are classified in various groups based on their utility in medicinal use as well as alchemical field. The most useful substances are classified into *Maharasa* group.

*Abhraka* is the first minerals of this group<sup>2</sup> used in the form of *bhasma* for therapeutic purposes. *Abhraka* is not mentioned anywhere in texts of *vedic* regime. *Acharya Vagbhatta* had mentioned *Abhraka* in *Ayurvedic* texts first time in the treatment of *arsha*<sup>3</sup>. Since the development of *Rasa shastra* in mediaeval period, the elaborated description of *Abhraka* is found.

### Vernacular Names

- |    |          |   |                |
|----|----------|---|----------------|
| 1. | Latin    | : | Mica           |
| 2. | English  | : | Glimmer        |
| 3. | Hindi    | : | <i>Abhrak</i>  |
| 4. | Sanskrit | : | <i>Abhra</i>   |
| 5. | Marathi  | : | <i>Abhrak</i>  |
| 6. | Gujarati | : | <i>Abhraka</i> |

### Grouping of *Abhraka* in different texts of *Rasa Shasta*

Different texts of rasa literature had put *Abhraka* in various groups like *Shakti*, *Maharasa*, *Pooti Louha*, *Uprasa*, *Updhatu*<sup>4-8</sup>.

### Mythological origin<sup>9</sup>

Ancient texts of *ayurvedic* pharmaceuticals had mentioned mythological origin of many metal and minerals used in the manufacturing of ayurvedic drugs. *Abhraka* was supposed to have following origin-

1. *Abhraka* is supposed to be the virya of 'Girija' (Parvati) which she used to discharge when excited.
2. *Abhraka* is supposed to have originated from the fire produced from Vajra (a weapon of Indra) while it was in operation during battle. It is said further that *Abhraka* was supposed to be distributed in the hilly areas which came into contact with the fire.

### Varieties<sup>10</sup>

Various parameters are described in different texts of *Rasa Shastra* for border classification of *Abhraka* Viz. as shown in Table 1 to 3.

1. According to color
2. According to reaction on fire
3. According to *udbhava* Sthana (place of origin)

### Synonyms<sup>11-13</sup>

Name of the synonyms described in various *Rasa* texts are broadly divided into

1. According to Origin: *Girija*, *Gouriteja*, *Girijavija* etc.
2. Color & Shape: *Ambara*, *Bahupatra*, *Subhra* etc.
3. According to Action: *Rasamula*, *Abhra* etc.

### Properties of good quality *Abhraka*<sup>14</sup>

1. *Abhraka* which is smooth, heavy, thick layered, could be separated easily, good colored, does not change its appearance in fire can be explained as good quality of *Abhraka*.

2. Apart from this all of the Rasa texts have unanimously accepted the *Krishnavajrabhraka* (black color) as the ideal one and capable of eradicating all sorts of ailments..

### **Properties of inferior quality *Abhraka*<sup>14</sup>**

1. On heating break down of *Abhraka* particles.
2. On hammering breaks with cracks and looks hard.
3. It is thin.

### **Pharmaceutical Processing**

Metals and minerals of *Ayurvedic pharmaceuticals* can be used internally only after *Shodhana* (purification) and *Marana* (calcination). After these processes materials are converted into very fine particles and can be absorbed and therapeutically effective.

### **Shodhana Process (purification)<sup>15</sup>**

Different methods and drugs are described for *Abhraka Shodhana* in the different texts of ayurvedic pharmaceuticals which are summarized in Table 4.

### **Process of *Abhraka marana* (Calcination)<sup>16</sup>**

This process is carried out to convert shodhit (purified) *Abhraka* into the therapeutic important dosage form i.e. Bhasma form. It changes heavy, hard and rough properties of the material into light, smooth, soft properties. *Marana* changes herbomineral compounds in the colloidal state to facilitate absorption and assimilation in the body system. The quantum of heat required by metals and minerals for their proper *paka* (incineration) neither less nor more quantum of heat is desirable, this process is known as *puta*. The drugs /medicines prepared by desired heating are only considered as best (pharmacotherapeutically suitable for internal use). Different methods of *Abhraka Marana*<sup>19-21</sup> - are tabulated in Table 5.

### **Therapeutic uses<sup>17</sup>**

According to *Rasa* texts *Abhraka* is therapeutically effective in following diseases-

1. Diseases of nervous system- *Buddhismritikshaya*, *Apasmara*, *Unmada*, *Bhrama*, *Shirovikar*, *Madatyaya*, *Nadishoola*.
2. Diseases of respiratory system- *Kasa*, *Shwasa*.
3. Diseases of digestive system- *Ajirna*, *Prameha*, *Udarroga*, *Trishna*, *Mukhvikar*, *Arsha*.
4. Diseases of reproductive system- *Garbhashaya Shodhaka*.

5. Diseases of blood- *Pandu*.
6. Diseases of liver- *Plehodara*.
7. Miscellaneous- *Netra Roga, Kshaya, Pittaja Roga, Udara Roga, Vataja Roga, Kaphaja Roga, Daha, Purana Jwara, Timir, Palitya, Khalitya*.

**Dose**<sup>18</sup> – ¼ *Ratti* (60 mg) to 2 *Ratti* (240 mg)

### **Antidote for *Abhraka***<sup>19</sup>

1. *Umaphala (Atasi) or Nishi / Haridra (Curcuma longa linn.)* dipped in water if used for 3 days removes undesired effects of *Abhraka* i.e. it acts as antidote for *Abhraka*.

### **CONCLUSION**

On the basis of above study it is concluded that *Abhraka (Biotite)* is a potent metals used in *Ayurvedic* pharmaceuticals since a long time.

In classics *Abhraka* has been greatly acclaimed not only as *rasayan* but also the curer of the hardly curable disorders even. It has been included in different groups by different authors. Classical texts had described its many types and pharmaceutical processes. Various researchers have worked on analytical and biological effects of *Abhraka* and reported that is a potent immunodialator drug.

More research is needed in on the metal *Abhraka* to establish their claimed therapeutic potential.

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**Table 1: Showing classification based on the color of *Abhraka***

Type	Color	Uses
Shweta	White	Shweta Karma – <i>biotite</i> making
Pita	Yellow	Pita Karma – gold making
Rakta	Red	Rakta Karma – Blood Formation
Krishna	Black	Rasayana Karma

**Table 2: Showing classification based to reaction on fire**

S.No.	Variety	Change on fire	Sound	Effect	Side Effect
1.	Pinaka	Layers get Separated & Swollen	Chit-Chit	-	Kusta, Malabheda
2.	Naga	Separate the layers with specific sound	Hissing	-	Bhagandara Mandala & Mahakusta
3.	Manduka	Jumps in fire	-----	-	Svasa, Ashmari
4.	Vajra	Unchanged	No sound produce	Vyadhi-Vardhakaya, Mrtyu Nasaka, Sarva Rogahara	-

**Table 3: Showing classification based on Udbhava Sthana of *Abhraka***

Variety	Quality
Uttaraseilottha (Northern hills)	Uttama (Best)
Daksinaseilottha (Southern hills)	Madhyama (Medium)
Purvaseilottha (Eastern hills)	Hina (Inferior)

**Table 4: Showing various methods explained in Rasa Literature for *Abhraka* Shodhana**

Process	Frequency
Nirvapa (heating to red hot state and quenching in liquid)	7
Nirvapa	8
Nirvapa	1
Swedana	3 & 2 days
Swedana	1 day
Bhavana (levigation)	8 yama (24 hour)
Peshna/Mardana (trituration)	1 day
Peshna / Mardana	3 day

**Table 5: Showing method of *Abhraka marana***

S.N.	Bhavana drug	Process	Type & no. of Putas
1.	Eranda patra Swaras + Guda + Vatapatra Samput	Bhavana, Putapaka	3 Putas
2.	Kasmarda Swaras/ Musta / Tanduliya Rasa	Bhavana Pulapaka	10 Gajputa
3.	Peetamalak+ Tankan	Bhavana Putapaka	60 Gajputa
4.	Vatamula Tvacha/ Tambulpatra Swaras/ Vasa + Matsyakshi Swaras	Bhavana Putapaka	20 Gajputa
5.	Arkamula swaras + Arkapatra samput + vatapraroaha swaras	Bhavana Putapaka	10 Gajputa



6.	Tankan	Bhavana Putapaka	7 Gajaputa
7	Kasamarda swaras	Bhavana Putapaka	100 Varahputa
8	Musta + Tanduliya swaras + Amalaki swaras Tankan (1/8)	Bhavana Putapaka	60 Varahputa
9	Vatamula tvacha Kwath + Tambulpatra swaras + Matsyakshi swaras	Bhavana Putapaka	20 Varahputa
10	Tankan + Godugdha	Bhavana Putapaka	30 Varahputa

