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Comparative Study on *Kasisa Bhasma* Obtained by Two Different Marana Procedures

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ABSTRACT

Indian alchemy is popular in the name *rasa shastra.* This branch got popularized in the first century AD and *Achayra Nagarjuna* is considered the prime Person of Indian Alchemy. In rasa shastra the dravyas are classified as *Maharasa, Uuparasa, Sadharana rasa* etc. *Rasa aushadees* are fast acting even with minimal dose[1]. *Kasisam* is an important rasa drug in *Ayurveda*. It's is included under *uparasa*[2]. It is basically an iron compound hence it is an excellent drug for iron deficiency anemia. Not only for anemic conditions but also it can be used in *Netra Roga, Vatha Kaphaja rogas, Switra roga Kshaya roga*[3] etc. Now a days most of the diseases are due to over nourishment. *Kasisa Bhasma* is an excellent medicine for diseases due to over nourishment (*bruhmana janya vyaadhis*). In *Rasa Tharangini* 21st chapter description about *Kasisa* can be obtained, where in one method of *Kasisa shodhana* and two types of *Kasisa marana* are mentioned[4]. In this article *Kasisa bhasma* prepared by these two methods are discuss along with the easiness, difficulties and importance of each method.

KEYWORDS

Kasisa marana, Rasa Tharangini

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INTRODUCTION

Knowledge about *Kasisa* was not started in the modern era. The antient Indians knew well about the *Kasisa* and its uses. In the old books acharyas have mentioned more than 100 important uses of *Kasisa* and its products. In classics two variety of *Kasisa* are mentioned *Pushpa Kasisa* and *Valuka Kasisa*[1]. And also describing about *Prakruthika Kasisa* (Natural source) and *Krithrima Kasisa* (Artificial source)[2]. Most of the rasa sastra books have mentioned about *Kasisa* in detail including it's Synonyms, *Beda, Swaroopa, Shodhana, Marana* etc. *Kasisa* as such is a toxic material so according to Ayurveda it needs *shodhana* and *marana* before the usage. Shodhana is done with *bringaraja swarasa*[3] and *marana* with 3 *lahku putas*. Compare to other *dhathus Kasisa* is less toxic and requires leas *puta* . The greenish yellow *Pushpa Kasisa* after shodhana and marana became reddish in colour. This *bhasma* was subjected to classical *Bhasmapareekshas* like *Rekhapoornathua, Vari thara, Amla pareeksha. Kasisa bhasma* is every effective in *Pandu, Visarpa, Yakruth pleeha amayas, Switra, Aarthava rogas*[4] etc. And it is a good hair dye too.

MATERIALS AND METHODS

Pushpa Kasisa is gradually converted to *valuka Kasisa* due to the atmospheric oxidation. *Pushpa Kasisa* is a greenish yellow crystalline material. For the *Kasisa shodhana* and *marana* 150 g of raw *Pushpa Kasisa* was purchased from SDM pharmacy Udupi. It was subjected to *shodhana* processes as early as possible to prevent it from converting to *Valuka Kasisa*.

Synonyms[5]

- *Kasisa*ka
- Pamsuka
- Pushpa *Kasisa*
- Khaga

Properties

- Identified as -Green vitriol.
- Chemical Name-Ferrous Sulphate.
- Chemical Formula- FeSO4
- Solubility-Dissolve in water.
- Uses-Fortify food, used in iron deficiency.

Shodhana[3]

Grounded 150g Pushpa *Kasisa*(Fig.1) Granules with the help of *Khalva yantra*, and made in to course powder. Powdered *Kasisa* was taken in a clean cotton cloth and made a potali (Fig.2). This *potali* was immersed in *Bringaraja swarasa* in an earthen vessel. The whole system was heated for 1 *yama* (3 hours). After cooling, whole *Shudha Kasisa* which got dissolved in *Bringaraja swarasa* was collected from the earthen vessel (Fig.3). The *potali* contain the physical debruises which was discarded.

Figure 1 Ashuddha Kasiasa

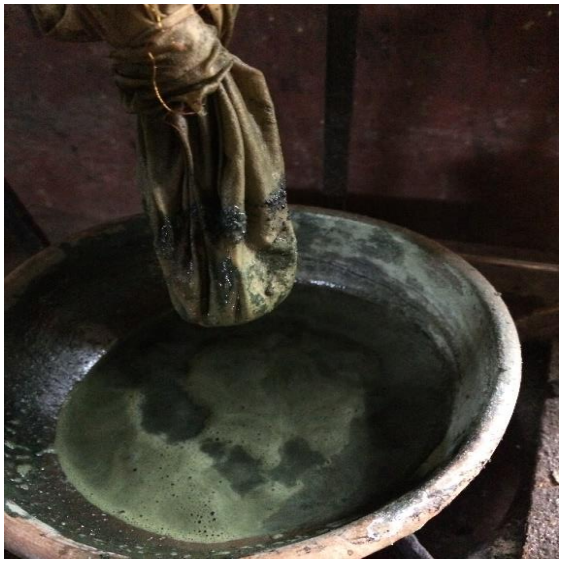

Figure 2 Kasiasa Shodhana In Bhringaraja Swarasa

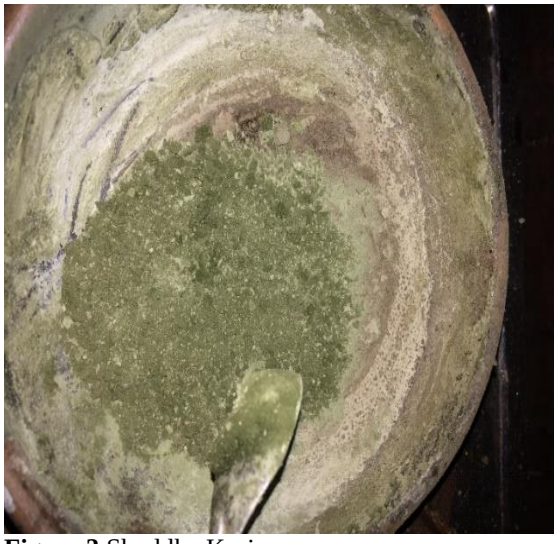

Figure 3 Shuddha Kasisa

Properties of *Sudha Kasisa*[6]

- Rasa- kasaya amla
- Guna - Grahi,vata kapha Samaka
- Veerya - Seeta
- Vipaka - Katu

Amayika prayogas[4]

- Switra kushta
- Netra Roga
- Mootra kaichra
- Kandu Roga
- Udara krimi etc.

Dose of *Kasisa* bhasma-½ rathi-2 rathi

Figure 4 Kanji for bhavana of kasisa

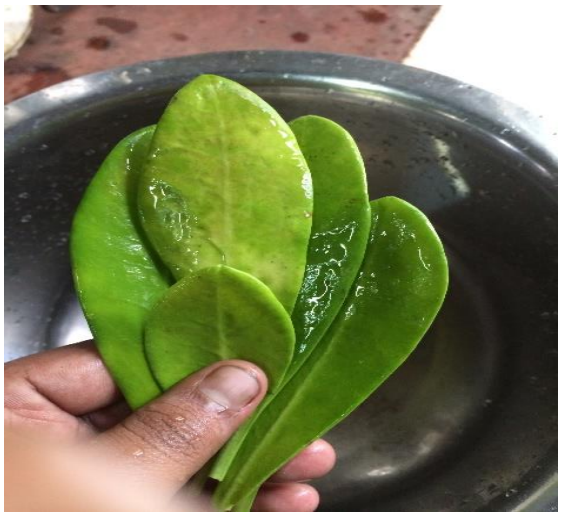

Figure 5 Snuhi patra for kasisa bhavana

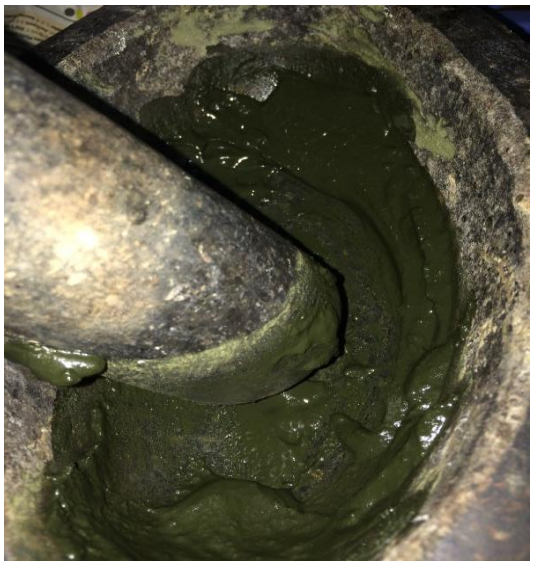

Figure 6 Snuhi patra swarasa bhavana of kasisa

MARANA PROCESS

Marana process method - 1

Procedure[7]

Sudha Kasisa (70g.) was taken in a clean *Khalwa* and triturated with sufficient quantity of '*Kanji'*(Fig.4) till *Samyak bhavitha lakshana* attained. The *bhavana* process was repeated 7 times and made *chakrikas*. These *chakrikas* was dried and put in a *sharava*. *Sharava bandhana* was done and subjected to *Laghu puta* (270°c for 20 min) with the help of electric Furnace.

Marana process method – 2

Procedure[8]

Sudha *Kasisa* 70 g was taken in a clean *Khalwa yantra* and added a sufficient quantity of freshly prepareded '*Snuhi Patra Swarasa'*(Fig.5). *Mardana* done (Fig.6) till it attained the *samyak bhavitha lakshana*. After attaining the *bhavitha lakshana* chakras was made (Fig.7) and dried. The dried *Kasisa* chakras was put in to a *sharava* and *sandhibandhana* done. The dried *sarava was* subjected for *Lakh puta* (270°c for 20 min.)

RESULT

After *Swangaseetha* the *sharavas* were opened. The two samples were subjected to classical *bhasma pareekshas*(Table:2). The two samples showed a drastic difference in their physical property (Table:1) and in classical *bhasma pareekshas* also.

Table 1 Physical properties of the bhasmas obtained by two methods

PROPERTIES	METHOD ONE	METHOD TWO
Colour	Brownish red (Fig.8)	Brick red (Fig.9)
Smell	Iron smell	Pleasant and iron smell
Touch	Smooth	Very smooth
Taste	Sour and iron taste	Iron taste

Table 2 Classical bhasma pareekshas for *Kasisa*

BHASMA PAREEKSHAS	METHOD -1	METHOD -2
Rekha poornathwa	Passed (Fig.10)	Passed (Fig.11)
Vari thararam	Not passed (Fig.12)	Passed (Fig.13)
Magnetic property	Not showed	Not showed
Amlathwa (sour taste for bhasma)	Present	Not present

DISCUSSION

Here the parameters like sample, quantity, shodhana procedure, temperature, timing followed were same. The *bhasma* prepared by first method was not completely converted into *bhasma* form. But the same time the sample from second method showed good results, and it got completely converted to *bhasma* form even by a single puta.

Here the only difference was the *Marana Dravya* used '*kanji*' in first method and '*Snuhi Patra Swarasa'* in second method. So, the' *Snuhi Patra Swarasa'* is better than *kanji* for *Kasisa marana.*

CONCLUSION

In preparation of *Rasoushadees* the proper *bhasma* preparation is a major concern. Most of the *Rasoushadees* need more than one *puta*. In *marana* procedure not only the temperature, time but also the *marana* drug has a great role. From the above *Kasisa* bhasma preparation by two methods we can conclude that *snuhi patra swarasa* is may better than *kanji* as a *marana dravya* for *Kasisa*. It only took one puta in electric Furnas, after that *shudha kasisa* fully converted to proper *kasisa Bhasma*. kanjji is basically an *amla dravya*. In *snuhi patra swarasa* contains different types of phlorotannin, flavonoids, saponins, tannins, terpenoids etc[9]. May be these chemicals act as a good agent for *bhasmeekarana* of *kasisa*. *Kasisa Bhasma* obtained by two different *marana* procedures tend to show difference in the qualities on *Bhasma pariksha*. Hence further studies on the analytical aspects can be undertaken in the future to standardize the *marana* technique so as the obtain best quality *Kasisa bhasma.*

Figure 7 Drying of chakrikas

Figure 8 Kajni bahavitha chakrikas after one puta

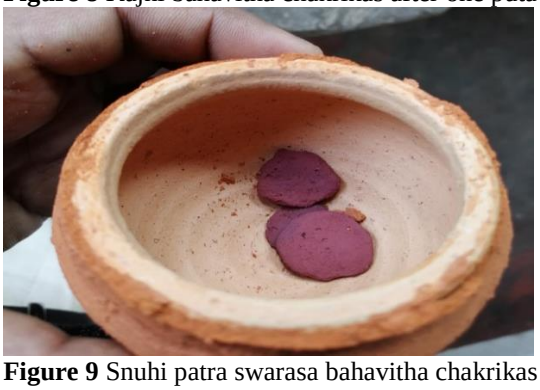

Figure 9 Snuhi patra swarasa bahavitha chakrikas after one puta

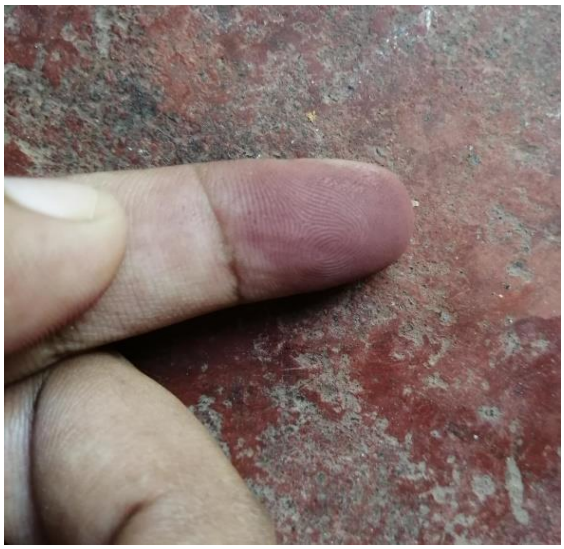

Figure 10 Rekha poornathua of kanji bhavitha kasisa

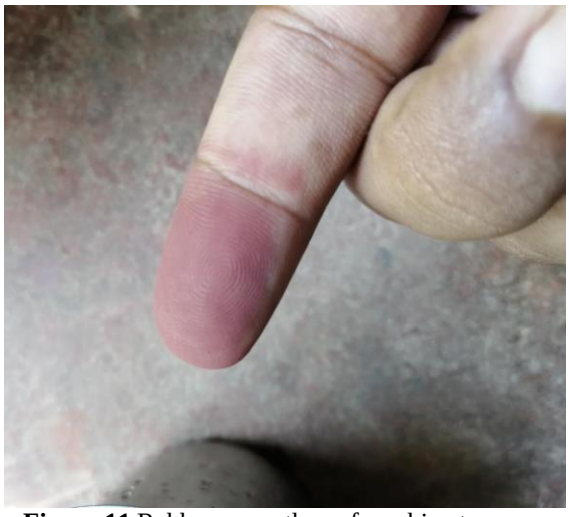

Figure 11 Rekha poornathua of snuhi patra swarasa bhavitha kasisa

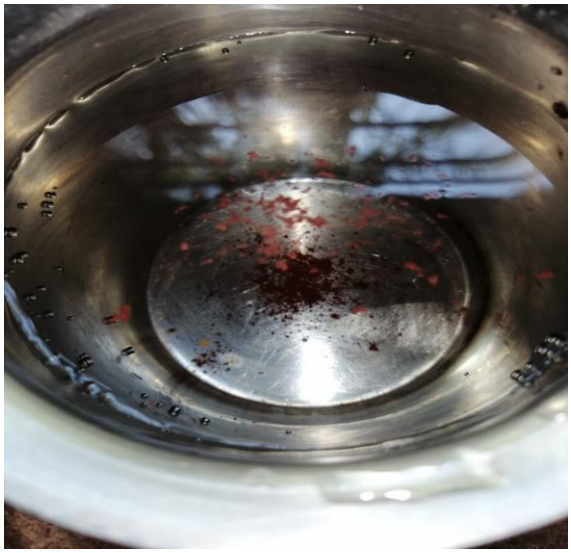

Figure 12 Vaari tharatua of kanji bhavitha kasisa bhasma

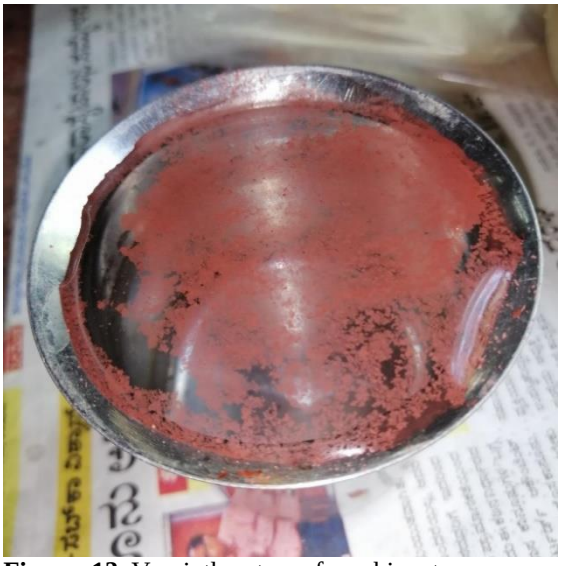

Figure 13 Vaari tharatua of snuhi patra swarasa bhavitha kasisa bhasma.

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