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# A Review on the Concept of Druti

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Abstract: All sciences are based on some of their basic principles, and each one of them has its own definitions and terminologies. Which have meaning winder than what they seems to be .Druti is one such process in the science of RAJA SHASTRA which forms both the basic principles and definition of science .Druti (Liquefaction) is one such important pharmaceutical process of Rasashastra where in the metals / minerals gems are transformed in to a permanent and stable liquid form. Generally it is seen that when metals and minerals are heated up to certain temperature they melt heating is stopped, temperature drops down, and the material solidifies. The liquid state of the material is temporary. Hence, Druti does not mean melting, but maintaining the molten state permanently, with the desired characteristic features. Details of the process and other things have been mentioned in Rasaratna Sammucchaya (R.R.S.), Rasendra Chudamani (Ra.Chu.), Rasa Prakash Sudhakara (Ra.Pr.Su.), Ayurveda Prakash (Ayu.Pr.), Rasa Hridaya Tantra (Ra.Hr.T.), Rasarnava and other classical texts of Rasashatra.

Keywords: Garbhadruti, Bahyadruti, Druti lakshana, Nirlepatvam, Drutatvam.

# INTRODUCTION

# Definition

Process which maintains hard and dense dravyas in the molten state is known as Druti.

1. Aushadhaadhmaana yogena lohadhaatvaadikam tathaa\ Santishthate dravaakaaram saa drutih parikeertitam|| R.R.S.8/84

2. Tushaadhaanyaadiyogena lohadhaatvaadikam tishthate dravaakaaram saa drutih parikeertitam\\ Ra.Chu.4/101

Lohadi dhatus and other mineral remain in the molten state after processing with some specific herbs and intense heat. This molten state is known as the Druti of that particular dhatu or mineral. Different opinions regarding the preparation of Druti are available in the classical texts of Rasashastra.

# Types

- I. Based on their use
- 1. In mercurial processes.
- 2. In treatment of diseases.

# II. Based on the method of preparation

- 1. Garbhadruti
- 2. Bahyadruti

# III. Based on the material

- 1. Loha druti (all metals)
- 2. Ratna druti (all precious stones)
- 3. Gandhak druti
- 4. Abhrak druti, etc.

Among these Garbhadruti and Bahyadruti are the methods used in mercurial processes.

# Garbhadruti

Grastasya draavanam garbhe garbhadrutirudaahrutaa $\ R.R.S.8/81$  When the material given as grass (bolus) is liquefied within mercury, it is known as Garbhadruti. The satva (extracts) of metals  $\ minerals$  are liquefied within mercury. This is essential to digest the bolus as it cannot be done without liquefying.

#### Bahyadruti

Bahireva drutam kuryaallohadhaatva adikam khalu| Jaaranaaya rasendrasya saa bahyadrutirucyate\\ R.R.S.8/ 82 Melting Abhrakadi satva separately and then mixing with mercury for Jarana is known as Bahyadruti. The satva of minerals are liquefied separately and then mixed with mercury.

#### Druti lakshana

5 characteristics of druti mentioned are:

Nirlepatvam drutatvam cha tajastvam laghutaa tathaa\ Asamyogaschasootena panchadhaa drutilakshanams\\ R.R.S.8\ 83.

#### Nirlepatvam

Nonsticking; should not stick to the container.

Drutatvam: Liquefied state; should be uniformly molten.

Tejastvam: Lustrous.

Laghuta: Lighter than the original weight.

Samyogaschasootena: Readily mixes with mercury.

**Vessel for Druti:** Different mushas according to their indications should be used for the purpose. Viz. Vajradravani Musha for Vajra, Mahamusha for Abhrak, Lohadi satva, etc.

#### **Fuel for Druti**

Draavane satvapaate cha maadhukaah khadiraah shubhaah\ Durdraave

Vamshajaaste tu swedane baadaraah shubhaah|| R.R.S. 8/38 for the process of melting or extraction of a metal or mineral, one should use the coal of Madhuka or Khadeera wood. For those which are difficult to melt, coal of Vansha, for swedan Badara coal should be used.

#### Storage

Kusumbhatailamadhye tu samsthaapyaa drutayah pruthak| Tishthanti chirakaalam tu praapte kaarye niyojayet|| R.R.S.4/82 Druti is to be stored in glass containers, particularly Ratnadi Drutis in Kusumbha Taila.

# METHOD

#### Gandhakdruti

Kalaamshavyosha samyuktam gandhakamshlakshna choornitam\ Aratnimaatre vastre tadveeprakeerya viveshtya tat\\Sootrena veshthayitvaa atha yaamam taile nimajjayet\\ Dhrutvaa samdamshato vartimadhyam prajvaalayeccha tam\ Druto nipatito gandho bindushah kaachabhaajane\\ R.R.S. 3/ 29, 30.

Shudha Gandhak and Trikatu Choornaare taken in the proportion 16:1, respectively, and mixed properly. The mixture is spread over a piece of cotton cloth of one aratni ( $10\frac{1}{2}$  inches) length and breadth. The cloth is then rolled and tied with a thread to make a wick and immersed in Tila taila for one yama (approx. 3 hours). The wick is then held in the centre with a pair of tongs and ignited at both the ends. Drops of oil dribble from the burning ends of the wick which is collected in a glass container.

# Ratnadruti

Raamatham panchalavanam sadaa kshaara yugmamapi chetsupeshitam\\ Chullikaa-lavanam amlavetasam pakvakumbhiphalam tathaiva cha\\ Chitramoolaka rudantike shubhaa jambukee jalayutaa dravantikaa\\ Arkadugdha samasoudhadugdhakam sarvameva mruditam shilaatale\\ Golamasya cha vidhaayanikshipedratnajaatishu varaani peshayet\\ Bhoorjapatramabhiveshnaa golake golakopari niveshtya sootratah\\ Vastrena samveshtha yatra tatah prayatnaaddolaakhyayantre athaniveshya golakam\ Sarvaamlayukte tushavaaripoorite paatre drudhamanmayasamdnyake hi\ Dinatrayam swedanakam vidheyam aahrutya tasmaadvaragolakam samkshaalayecchaamlajalena chaapi samjaayate ratnabhavaadrutishcha\\ Ra.Pr.Su. 7/57-61

# Hingu, five Lavanas, two Ksharas, Chullika lavana, Amlavetas, ripe Kumbhiphala, Chitraka mula, Rudanti, Jambuki, fresh Dravanti, Arka dugdha, snuhi dugdha are made into fine paste. A ball of this paste is made; powder of the desired ratna is kept in the centre and wrapped in Bhoorja patra.

This is then wrapped with a cloth and finally tied with a thread. This pottali is further subjected to swedana in Amla Tushodaka with the help of Dolayantra for three days. The druti is then collected after washing with hot water.

# Characteristics

# Chavda Arun; International Journal of Advance Research, Ideas and Innovations in Technology.

Varnena saa ratnanibhaa chakaantyaa laghveebhaved dehakaree cha samyak\ Lohasyavedham prakaroti samyak sootena samyak milanam prayaati\\ Tadaa bhaveyuh khalu siddhataa yadaa hingvaadivargena milanti samyak\ Yaamadvayam kaamsyavimarditaa vai chaatiprayatnena tu vaidhavaryaih\ Kasyaapi nuh siddhyati vai drutishcha yadaa prasannah khalu paarvateeshah\\ Ra.Pr.Su.7/62-65.

Ratna Druti should possess the colour and luster of that ratna from which it is made. It should mix with mercury easily during lohavedha. It should be useful as Dehakara (immune modulator). It should mix with hingwadi varga dravya in kamsya patra.

# CONCLUSION

It was found that the concept of Druti is unique and has not been limited only a procedure for liquefying a metal, Mineral But has other implications too. Truth has not been developed for mercurial process, especially lohavada and later used in curing diseases.