

## ***A REVIEW OF PROPERTIES OF 'UDAYABASKARA RASA' - A HERBO-MINERAL AYURVEDIC FORMULATION***

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### **ABSTRACT**

The main objective of this review article is to discuss the therapeutic uses of *Udayabhaskara Rasa* and to discuss the different pharmacological properties and therapeutic uses of isolated constituent drugs of *UdayabhaskaraRasa*. The authentic subject material has been reviewed from *Ayurveda* and modern medical literature. Different research and review article were searched in different journals. The subject material has also been searched on internet. This review is mainly focused on different aspects of herbo-mineral *Ayurvedic* formulation *Udayabhaskara Rasa*. In *Ayurveda UdayabhaskaraRasa* is mentioned in the management of *AmavataRoga* (Joint disorder). It is well recognized in *Ayurveda* that most of the joint diseases run a chronic course and are difficult to treat. Now a days, it is well acknowledged and established by several experimental and clinical studies that joint diseases have a psycho-social impact. Most of the joint diseases have strong relation with psychological stress and stress is responsible for onset and exacerbation of different joint disorders. Herean attempt has been made to address therapeutic uses of *Udayabhaskara Rasa* and its constituent drugs.

**Keywords:** *Udayabhaskara rasa, amavata, joint disorder*

### **INTRODUCTION**

Man has been using natural products for combating diseases since times immemorial. Natural products, including plants, animals and minerals have been the basis of treatment of human diseases. History of medicine dates back practically to the existence of human civi-

lization which includes many ludicrous therapies.

Nevertheless, ancient wisdom has been the basis of modern medicine and will remain as an important source of future medicine and therapeutics. An impressive number of

modern drugs have been isolated from natural sources. Many of these isolations are based on the uses of these agents in traditional medicine. The plant based, traditional medicine systems continues to play an essential role in health care, with about 80% of the world's inhabitants relying mainly on traditional medicines for their primary health care.

*Udayabhaskara rasa*<sup>1</sup>, an Ayurvedic herbomineral formulation is indicated in the management of *Amavata*<sup>2</sup> (joint disorder). It contains eight mineral drug and seven herbal drugs viz *Shuddhaparada* (mercury), *Shuddhagandhaka* (sulphur), *Shuddhatankana* (borax), *Shuddhajayapala* (Croton tiglium), *shunti* (Zinziberofficinale), *maricha* (Piper nigrum), *pippali* (Piper longum ), *yavakshara*, *sarjakshara*, *samudralavana*, *saindavalavana*, *sourchalalavana*, *vidalavana*, *romakalavana*, *beejapoor*a (Citrus medica).

**Table1:** Table showing list of drugs with Quantity

INGREDIENTS	QUANTITY
<i>ShuddhaParada</i>	1 part
<i>ShuddhaGandhaka</i>	1 part
<i>ShuddhaTankana</i>	1 part
<i>ShuddhaJayapala</i>	1 part
<i>Trikatu</i>	1 part each
<i>Yavakshara</i>	1 part
<i>Sarjakshara</i>	1 part
<i>Panchalavana</i>	1 part
<i>Beejapooraswarasa</i>	Q.S

### PARADA

As soul plays an important role in body, like wise *Parada* is the soul of *Rasasastra* and is considered to be the master metal. Because of its mystical importance, it sits at the head of all other *rasa* base materials. Any *rasa* medi-

cine containing mercury has its strength increased tenfold.

Mercury is a dense, silvery-white, poisonous metal with a mirror-like appearance. It is also known as quicksilver or hydrargyrum. It is the only metal that is liquid at room temperature and has one of the narrowest ranges of its liquid state of any metal. It is divisible into spherical globules, mobile, without having any odour / taste, cold to touch, slowly volatilizing at ordinary temperature.<sup>3</sup>

### Pharmacological and Therapeutic Properties:<sup>4</sup>

**Rasa** - *Shadrasa*  
**Guna** - *Snigdha, Sara and Guru*  
**Veerya** - *Ushna*  
**Vipaka** - *Madhura*  
**Doshagnata** - *Tridoshagna*  
**Karma** - *Yogavahi, Rasayana, Vrishya, Balya, Vayastambhana, Pustikaraka, Deepana, Agnivardhaka, Deha and LohaSiddhikara, Ropana, Krimighna.*  
**Rogagnata** - *Vataroga, ValiPalita, Jara, SarvaAkshiroga, Krimi, Kusta.*

### GANDHAKA

*Gandhaka* is grouped under *Uparasa*. It is considered as an essential agent for the various process of *Parada* such as *Murchana* and *Jarana* etc. It is believed to impart many desirable properties to *Parada* and reduce its toxic effects. Probably because of this *Parada* is mostly administered internally in association with *Gandhaka*, as *Parada* preparations without *Gandhaka* are considered being toxic. Sulphur is an abundant, multivalent non-metal which has the atomic number 16. It is denoted with the symbol **S**. Elemental Sulphur is a bright yellow crystalline solid when at room

temperature. In nature, it can be found as the pure element and as sulphide and sulphate minerals. It is estimated as the Ninth most abundant element in the universe.

**Pharmacological and therapeutic properties:**

*Rasa* : *Madhura*<sup>5</sup>, *Katu*, *Tikta*, *Kashaya*<sup>6</sup>  
*Guna* : *Ushna*, *Sara Snigdha*  
*Virya* : *Ushna*  
*Vipaka* : *Katu*  
*Karma* : *Deepana*, *Pachana*, *Vishahara*, *Jantughna*,  
*DoshaPrabhava:* *KaphaVatahara*, *Pitta-vardhaka*.  
*VyadhiPrabhava:* *Kandu*, *Visarpa*, *Krimi*, *Kustha*, *Kshaya*, *Pleeha*, *Rasayana*.

**TANKANA**

English name: Borax

Its chemical name is Sodium pyroborate or sodium tetra borate or hydrated sodium borate with chemical formula  $Na_2B_4O_7 \cdot 10H_2O$ . It belongs to the class carbonates and subclass Borates.

**Pharmacological and therapeutic properties:**

*Rasa* - *Katu*  
*Guna* - *Teekshna*, *Laghu*, *Sara*, *Rooksha*  
*Veerya* - *Ushna*  
*Vipaka* - *Amla*  
*Doshakarma* - *Kapha*, *vatahara*, *Pittakrut*  
*Rogaghnata* - *Kasa*, *Swasa*, *Agnimandya*, *Visha*, *Adhmana*, *Vrana*, *Asmari*, *Atisara*, *Sthavara visha*<sup>7</sup>  
*Matra:* 1-2 Ratti. (125 – 250mg),  
*Anupana:* *Madhu*, *Ghrita*

**Table 2:** List of pharmacological, physical and chemical properties of *Panchalavana*

Sl No	Drug name	English name	Pharmacological Properties	Physical properties	Chemical Composition
1.	<i>SaindhavaLavana</i>	Rock salt	<i>Rasa</i> - <i>Madhura</i> <i>Guna</i> - <i>Laghu</i> , <i>snigdha</i> <i>Veerya</i> - <i>Sheeta</i> <i>Karma</i> - <i>deepana</i> , <i>vra-nashodhana</i> , <i>rochana</i> , <i>hrudya</i> , <i>vrushya</i> .	Appearance—stony piece Colour- whitish red Consistency-hard dissolve in water Taste-salty-sweet	<i>Sodium chloride</i>
2.	<i>SouvarchalaLavana</i>	Black salt	<i>Rasa</i> - <i>Katu</i> <i>Guna</i> - <i>Laghu</i> <i>Veerya</i> - <i>usna</i> <i>Karma</i> - <i>gulma</i> , <i>shoola</i> , <i>vibhandahara</i> , <i>ruchya</i> .	Taste – saltish Appearance – big masses Colour – blackish brown Consistency - Hard	Sodium chloride NaCl – 97.82 % w/w Total Sulphide Na2S – 0.918% w/w Iron fe – 0.030 % w/w Insoluble matter – 0.07% w/w
3.	<i>Vida Lavana</i>	Sanchal salt	<i>Karma</i> - <i>Hrudroga-nashana</i> , <i>vatanulomana</i> , <i>ruchya</i>	Appearance – small pieces Colour – Greyish white	NaCl – 93.77% w/w Sodium sulphide Na2S – 0.121% w/w

				Consistency – Hard	Iron fe – 0.0089 %w/w
4.	<i>SamudraLavana</i>	Sea salt	<i>Rasa -Madura, lavana</i> <i>Guna - snigdha</i> <i>Karma -vidahi, shoolagna</i>	Appearance – cubical crystals Colour – whitish grey Consistency – Hard	NaCl – 91.39% w/w Sodium Sulphide – Na <sub>2</sub> S – 0.121% w/w Others – minor quantities of calcium sulphate, magnesium sulphate, magnesium chloride
5.	<i>RomakaLavana</i>	Sambhar salt	<i>Veerya -Ushna</i> <i>Guna - Teekshana</i> <i>Vipaka -Katu</i> <i>Karma -Mootrala, vid bheda</i>	Appearance – circular crystal form Colour – whitish grey Consistency – hard	NaCl – 97.11% w/w Sodium sulphide – Na <sub>2</sub> S – 0.060 %w/w Sodium bicarbonate NaHCO <sub>3</sub> – 0.049% w/w

### JAYAPALA<sup>8</sup>

Botanical Name: *Croton tiglium* Linn.

Family : Euphorbiaceae

#### BOTANICAL DESCRIPTION

A small evergreen tree 15-20' high, the young shoots sprinkled with stellate with stellate hairs; bark smooth and ash coloured. Leaves simple, alternate, thinly membranous, 5-10' cm long. Glabrous, ovate, acuminate, serrate, glandular beneath, 3-5 nerved, petiole slender, 2.5-5.0cm long, Flowers small, yellowish-green, unisexual, in 5-7.5cm long racemes. Capsule obtusely trigonous, glabrous, turbidately ovoid, upto 2.5cm long, white. Seeds oblong, pale, obtusely trigonous and about 2cm long, flowering and fruiting: march-june

#### Parts Used:

Seeds, Wood, Seed oil, Root.

#### ACTION AND USES

Root is beneficial in dropsy, lead poisoning, cerebral haemorrhage or convulsions and congestions, apoplexy, intestinal obstructions, gout, rheumatism, arthritis, lock jaw, mania, chronic laryngitis, bronchitis and to increase vigour mainly.

Croton seeds are used as a drastic and violent purgative in conditions like apoplexy, insanity and convulsions attended with high blood pressure. The expressed oil from the seed is given in paralysis and painful conditions of joints and limbs. The oil from the seed is purgative, carminative, and useful in diseases of the abdomen, psychological illness and inflammations.

#### Pharmacological and therapeutic properties:

*Rasa* - *Tikta, Katu*

*Guna* - *Guru, ruksha, tikshana*

*Vipaka* - *Ushna*

*Doshagnata* - *Kaphapittashamaka*

*Karma- Lekhana, vidahi, sphotajanana, krimigna, shothahara, vishagna, virechana, kustagna, kaphagna*

*Rogagnata - Root -kusta, krimi, jalodara, sarpavisha, kasa,*

Seed oil- *udararoga, vibandha.*

**Dosage-** Seed powder 6-12gm, seed oil-1drop.

### **SHUNTI<sup>9</sup>**

**BOTANICAL NAME:** Zinziberofficinale

Family : Zinzeberaceae

*Shunti* is one of the reputed drugs of the *Ayurveda*. *Charaka, Sushruta* and *Vagbhata* mentioned its use in *Udararoga, Shotha, Karnashula*, in *kaphavataroga*. Various properties and uses have been mentioned in different *nighantus* such as *Raja Nighantu, Shaligram-Nighantu* and others.

#### **Botanical description:**

A herbaceous, rhizomatous perennial plant. Rhizomes are horizontally growing with sym-podical branching. It grows to a length of 5 to 15 cm, width of 3-4cm and thickness of 0.5 to 1.5 cm. Shaper is laterally flattened on the upper side with sort flattened, oblique, obovate, branches or fingers. Fracture surfaces of rhi-zomes shows a narrow bark, a well-marked endodermis and a wide stele. Leaves are simple, alternate, distichous, narrow, oblong, lanceolate, 15-30cmlong and 2-3cm broad with sheathing bases and the blade gradually tapering to a point. Flowers are from solitary, lateral, radical, pedunculate, oblong, cylindrical, spike. Flowers are rare, rather small with superior gamosepalous calyx and corolla of 3 sub equal oblong to lanceoalate connate green-ish segments. Flowering seasons is usually the rainy reason.

**Part used:** Dried Rhizome.

#### **Pharmacological properties:**

*Rasa* : *Katu*

*Guna* : *Laghu, Sheetha*

*Veerya* : *Ushna*

*Vipaka* : *Madhura*

*Doshagnata* : *Kaphavatashamaka*

*Karma* : *Agnideepaka, Hridya, Ruchya, Swarya, Jwaragna, Shoolagna.*

### **PIPPALI<sup>10</sup>**

Botanical name :Piperlongum

Family : Piperaceae.

*Charaka* included *pippali* under *kasahara, ShiroVirechana* and *Deepaniyaganas*, where as *Sushruta* included it under *pippalayadi, Urdvabhagahara* and *ShiroVirechaniyaganas*.

#### **General features:**

Piper longum is a glabrous, under shrub, with erect stem and slender branches. The slender branches more often creeping or trailing and rooting below or rarely descendent to few meters. Leaf is simple, alternate, entire glabrous, 7 veined leaves that vary in shape and mode of attachment even in the same plant. Leaves are stipulate, petiolate and nearly sessile according to their position on the plant. Blade varies in shape in the same plant. The upper leaves are generally sessile, amplexual or stem clasping, ovate to cordate at base while the lower ones are usually cordate.

#### **Pharmacological properties:**

*Rasa* -*katu*

*Guna* -*Laghu, Snigdha, tikshna*

*Veerya* - *Anushnasheeta*

*Vipaka* - *Madhura*

*Doshagnata* – *Kaphavatashamaka*

Rogahnata – Shothahara, SheetayuktaVedana, MastiskaDaurbalaya, Vatavyadhi, Aruchi, Agnimandya, Ajeerna, Vibandha, Gulma, Udarashoola, Arsha, yakridvikara, Pleehavidhi, Krimiroga, Hrid – Daurbalya, Pandu, Raktavikara, Shukradaurbalya, Kushta, JeernaJwara, Vishamajwara, SamanyaDaurbalya, Rajorodha, Kashtaprasava.

Karma – Raktokleshaka, Jantughana, Shirovirechana, Medhya, Deepana, Vatanulomana, Shoolaprashamana, Raktoshodhaka, Kasa-hara, Swasahara, Hikkanigrahana, Mootrala, Vrishya, Kushtaghna, Jwaraghna, Vishamajwarapratibandhaka, Balya, Rasayana, Garbhashayasankochaka.

#### MARICHA<sup>11</sup>

BOTANICAL NAME: Piper nigrum

Family: piperaceae

Charaka classified Maricha under Deepaniya, ShoolaPrashamana, Krumigna and Sushruta under Pipplyadivarga and in Truysana.

#### Habit and general features:

It is stout, quite glabrous, glandular, aromatic, woody, perennial climber, clinging to supports by means of several adventitious roots. Branches are Short, Stout Lateral. Leaves are Simple, Short stalked 10-18 cm long and 5-13 cm board. Glabrous one – seeded berries are about 3mm in diameter and are reddish when ripe, Fruits ripen in December and January.

**Parts used:** Fruit and Root.

**Dosage:** Phalachoorna 0.5 to 1g.

#### Pharmacological properties:

Rasa : Katu

Guna : Laghu, Teekshna

Veerya : Ushna

Vipaka : Katu

Doshagnata : Vatakaphahara

Karma : Deepaka, Pachaka, Swedajanaka, Jwaragna, Pramathi,

Indications : Jwara, Kasa, Aruchi, Agnimandya, Prathishyaya

#### SVARJIKAKSHARA<sup>12</sup>:

Svarjikakshara is prepared from the plant known as Iona (kshudraduralabha) in Punjab and Sindh.

The svarjikakshara which is obtained is purified by mixing it in water and decanting the water next day and filtering it 5-6 times with thick cloth and dried on fire.

In certain hills or places adjacent to hills layer of alkaline soil are found in abundance this soil is called as “swarjikamrit”, it is dissolved in 4 times of water filter it many times, distill the water and dry in to crystal form. The obtained drug is called as swarjikakshara.

#### Pharmacological properties:

Veerya- ushna

Guna -laghu, teekshna, rukshaguna, Kledhi, vidarana, dahana, dipana, and chedana

Matra –3-12 ratti

Anupana – madhujala and ksheera

#### Chemical constitutes-

Galacto-catechin, catechin, epigallocatechin and leucodelphinidin, B-phenethylamine, hordenine, salsodine.

#### YAVA KSHARA<sup>13</sup>

Yava – Barley ( HardeumVulgare)

Ripped barley plants should be cut dried and then burnt to ashes and the alkaline material, obtained from that ash by ksharavidhi is known as Yavakshara.

### YAVAKSHARA NIRMANA:-

Yavapanchanga bhasma 8 parts water  
7 times vastragalana and again heat dried.

### Pharmacological properties:

Veerya - ushna

Guna - laghu, thikshna, rukshaguna,  
Kledhi, dahana, dipanaandchedana

Rogaghnata -hridroga, pandu, grahani, pli-  
haroga, anaha and galaroga.

Matra – 3-10ratti

Anupana – jala/ ksheera

### BEEJAPOORA SWARASA<sup>14</sup>

Botanical name : Citrus medica

Family : Rutaceae.

Citron fruit looks like a big lemon, with very less inner pulp content. Its fruit peel, seed, pulp etc are used in Ayurvedic treatment. It is widely used for treating abdominal colic, digestive disorders, piles etc.

### Pharmacological properties:

Rasa :Amla, Madhura

Guna :Laghu,Snigdha,

Vipaka :Amla

Veerya :Ushna

Karma :Deepana, Hridya.

Doshaghnata :Vatakaphahara.

Partused-Fruit,root

Dosage- Fruit juice 10-20 ml

### DISCUSSION

- Amavata is an auto-immune disorder, drugs like *parada* and *gandhaka* (i.e. *kajjali*) which is *shreshtarasayanah* helps in such auto-immune disorder by boosting up immunity.
- *Tankana* acts as *vata-kaphahara*, *jayapala* does *rechana*, and brings back *vata* to its normal position.

- Drugs like *trikatu* helps in *amapachana* & acts as *jwarahara*.
- Two *ksharas* acts as *dipana*, *chedana* etc.
- *Panchalavana* acts *asamahara*, *aruchi-hara*, *shothahara*, *dipana*, *pachana*, *vedhanahara*.
- *Beejapoor* acts as *vata-kaphahara*. All these pharmacological actions are against the qualities of *amavata*, by this we can infer that *udayabhaskara* rasa can become one of the best remedy for *amavata*.

### CONCLUSION

This review has presented a collective knowledge on therapeutic, pharmacological and medicinal applications of *udayabhaskara rasa* and its constituent drugs. This review will also facilitate to gain all about the past scientific research and the necessary information about the enormous pharmacological activities of these drugs which would motivate and lead to further exploration of pharmacological activities of these ingredients to protect human beings from different types of diseases specially joint disorders and may serves as useful treasure for the promotion of health.

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