

PHARMACEUTICAL ATTRIBUTES OF TRIPHALA IN AN INDIAN ALCHEMY (RASASHASTRA) - A COMPREHENSIVE REVIEW

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ABSTRACT

Ayurveda comprehends *Ashtangas* to treat the various elements of mankind branch of Ayurveda system of medicine preparing *Rasaushadis* for management of common to chronic elements. It deals with the pharmaceutical procedures of the drugs belongs to herbal, mineral, Animal origin. The non-suitable form of drugs are to be converted adopting various pharmaceutical techniques including selection, observing *Grahya Lakshana shodhana* (Purification process), *Jaran* (incineration), *Maran* (Calcination), *Sattvapathan* (Extract) and *Amritikaran* (Nectarization) property into the drugs. To convert into them suitable form for medicinal use wide range of herbal drugs are incorporated. These drugs are responsible for minimizing the toxicity increasing the potency removing the unwanted chemical impurities etc. *Triphala* is one of such the unique formulation combinations of three myrobalans having wide range of therapeutically importance and also it is a potent formulation used in Indian alchemy, successfully for processing of various *Rasadravyas*. Hence a review from available resources in *Rasashastra* to explore the inherent qualities of these formulations for processing drugs.

Keywords: *Triphala*, *Rasashastra*, *Rasadravyas*, Pharmaceutical

INTRODUCTION

Rasashastra called Indian alchemy is one of the important and potential branch deals with transformation of non-suitable form of *Rasadravyas* (Metals, minerals, animal originates, marine originates and precious stones) for the benefit of mankind to prepare the medicines and the poverty. The basic aim of *Rasashastra* is for *Lohavada* and *Dehavada*. The *Rasadravyas* classified into different groups and focus has been given to *Parad* as a prime drug and remaining drugs are classified based on the utility

with respect to *Parad karmas* as *Maharasa*, *Uparasaa* and *Sadharanarasa*, *Dhatu Varga*, *Ratna varga*. The raw drugs basically identified based on the specific characteristics mentioned in the *Rasatext* and then these are refined through a process of Heating, quenching, boiling, crushing, oxidizing, into convert a suitable form fit for internal and external use incorporating juices of Herbal drugs and animal products like honey, ghee, milk, urine etc.

The quality transformation of mineral metallic and animal originates plants are used in the various pharmaceutical procedures. The *triphala* is one of the widely used polyherbal formulation in many disorders due to its potent pharmacological activities. It is composed of the three myrobalans *Terminalia Chebula* (*Haritaki*), *Terminalia bellerica* (*Bibhitaki*), *Embllica officinalis* (*Amalaki*) prepared with equal proportions of pericarps of the these myrobalans.¹

In ancient ayurvedic text *triphala* apart from therapeutic agent also used in the Indian alchemy for

processing of various minerals, metals, precious stones, from transformation of unwanted properties into useful medicinal properties through the inert qualities of this formulation are extensively reviewed and presented to explore how the drugs basically help in the transformation of qualities through the inherent properties and fit for to treat various elements. The available references collected wherever *Triphala* has been used pharmaceutically are tabled.

Table 1: Synonyms of *Triphala* in *Samhitas* and *Nighantus*²

Synonyms	Ch.S	Su.S	As.S	Sh.S	M.N	Kai.N	B. N	Raj.N	Pri. Ni
<i>Phalottama</i>	-	-	-	-	+	+	-	-	-
<i>Phalshresta</i>	-	-	-	-	-	+	-	-	-
<i>Phaltrik</i>	+	+	-	+	-	+	+	-	-
<i>Phaltraya</i>	-	-	-	-	-	+	-	-	-
<i>Triphala</i>	+	+	+	+	+	+	+	+	+
<i>Triphali</i>	-	-	-	-	-	+	-	-	-
<i>Vara</i>	+	+	+	+	+	-	+	-	+
<i>Sreshtha</i>	-	-	-	-	+	-	-	-	-

Table 2: Classification of *Triphala* in *samhitas* and *nighantu*

<i>Samhita</i> and <i>Nighantu</i>	<i>Varga</i>
<i>Charak Samhita</i> (Su.4/24,39,50) ³	<i>Virechanopag Mahakasaya, Jwarhar Mahakasaya, Vayasthapana Mahakashaya</i>
<i>SushrutSamhita</i> (Su.38/20,43-,54,56,60) ⁴	<i>Muskadi Gana, Parushkadi Gana, Mustadi Gana, Triphala Gana, Amalakyadi Gana,</i>
<i>Astanga Hridaya</i> (15/2,13,32,40)	<i>Virecana Gana, Parushkadi Gana, Muskakadi Gana, Mustadi Gana</i>
<i>AstangaSangraha</i> (Su14/3,16/5,17,21) ⁶	<i>Virechanopayogi Dravyas, Jwarahara Mahakasaya, Parushkadi Gana, Muskakadi Gana, Mustadi Gana</i>
<i>Dhanvantri Nighantu</i> (1/202-213,7/1-2) ⁷	<i>Guduchyadi Gana, Mishrakadi Gan</i>
<i>Sodhala Nighantu</i> (1/231,233,235) ⁸	<i>Guduchyadi Gana</i>
<i>Kaidev Nighantu</i> (1/245) ⁹	<i>Aushadi Varga</i>
<i>Madanpal Nighantu</i> (32) ¹⁰	<i>Abhyadi Varga</i>
<i>Raj Nighantu</i> (24/3) ¹¹	<i>Mishrakadi Varga, Audhabhida Gana</i>
<i>Bhavprakash Nighantu</i> (1/43) ¹²	<i>Haritkyadi Nighantu</i>
<i>Priya Nighantu</i> (1/15-16) ¹³	<i>Haritkyadi Nighantu</i>
<i>Nighantu Adarsh</i> ¹⁴	<i>Haritkyadi Nighantu</i>
<i>Dravyaguna vigyan</i> ¹⁵	<i>Rasayana Varga and Chednadi Varga</i>

Table 3: Rasa Panchak²

Dravya	Haritaki	Vibhitaki	Amalaki	Triphala
Rasa	Panchrasa (kashaya)	Katu	Pancharasa (Amla)	Kashaya
Guna	Laghu , Ruksha	Laghu , Ruksha	Laghu , Ruksha , sita	Ruksha ,Sara
Virya	Ushna	Ushna	Sita	Anusna
Vipaka	Madhura	Madhura	Madhur	Madhura
Prabhav	Rasayana	Chedana	Rasayana	Rasayana
Dosha- Karma	Vata	Kapha	Pitta	Tridosha
Karma	Anuloman , Caksusya ,Dipana, Hridya medya Sarvadosha – Prasamana	Caksusya,kesya, Bhedaka, Krminasana , Kasahara	Vrishya, Caksusya	Caksusya , Dipana, Varnaropan, Rucikara, Medohara

Table 1: Shodhan of Rasadravyas¹⁶:

Grinding along with liquids like juices, decoctions, etc or subjecting to the vapors of these liquids etc,

are done for removing the impurities of the drugs is known as *shodhan* or purification.

Table 1: Triphala kwath used as a media for Shodhana of Rasadravyas:

S. no	RasaDravya	Method adopted	Media	Purpose	Reference
1.	Parada	Samanya shodhan vidhi (Mardan)	Triphala Kwatha.	Shodhan	R.T.5/31 ¹⁷
	18 samskar	a.Murchan samskar (Mardan)	Triphala Kwath	Shodhan	R.H.T 2/6 ¹⁸
2.	Abhraka	Nirvapa	Triphala kwath	Shodhan	R.R.S 2/16-18 ¹⁹
3.	Dhanyabhraka	Nirvapan	Triphala Kwath	Shodhan	Ananda khand 7/164 ²⁰
4.	Makshika	Nirvapan	Triphala Kwath	Shodhan	R.R.S 2/83 ²¹
5.	Shilajatu	Mardana	Triphala Kwath	Shodhan	R.R.S 2/117 ²²
6.	Gandhak	Dhalana	Triphala kwath	Shodhan	R. chi5/9 ²³
7.	Anjana	Swedana	Triphala Kwath	Shodhan	Ayu pra 2/23 ²⁴
8.	Loha (samanya shodhan)	Nirvapana	Triphala kwath	Shodhan	R.R.S 5/103 ²⁵
9.	Vishesha shodhan	Nirvapan	Triphala kwath	Shodhan	R.R.S 5/105 ²⁶
10	Vaidurya	Swedana	Triphala kwath	Shodhan	R.R.S 4/62 ²⁷

(R.T- Rasatarngini, R.H.T- Rasa Hridaya Tantra, R.R.S- Rasa ratna samucchaya, Ak- Anandakandam, R.Chi- Rasendra Chintamani, Ayu.Pra- Ayurveda Prakash)

The metals and minerals are generally incinerated to reduce them into ashes before administering them into the body. This technique is called *Marana*.

Meaning of the word killing. The *Shodhita* (purified) metals and minerals, when subjected to grinding with juices or decoctions as suggested in the text and reduced to ashes by bringing into contact with fire this process is called *marana* and also *putanam* (Incineration)

Table 2: Triphala kwatha used as bhavana dravya in the Marana of Rasadravyas

S.no	Rasa dravya	Method adopted	Media	Purpose	References
1.	Loha	Bhavana	Triphala kwath	Marana	R.R.S 5/126 ²⁸
2.	Kanta loha	Mardana	Triphala kwath	Marana	R.R.S 5/118 ²⁹

The incinerated metals and minerals, if still retain any unwanted properties are subjected to the process of *Amritikaranam* (Nectarization). Or the process

done to the *bhasmas* of metals etc to alleviate the reminiscent impurities is called *Amritikarana*.³⁰

Table 3: *Triphala kwath* used as an ingredient in *Amrutikarana of Rasadravyas*

s.no	Rasa dravya	Method adopted	Media	Purpose	References
1.	<i>Abhraka</i>	<i>Bharjan</i>	<i>Triphala kwath</i>	<i>Amritikarana</i>	<i>R. Chi 4/33</i> ³¹
2.	<i>Makshika</i>	<i>Bhavana</i>	<i>Triphala kwath</i>	<i>Amritikarana</i>	<i>R.R.S 2/93</i> ³²

DISCUSSION

In *Ayurveda Triphala Kwatha* is used in many pharmaceutical procedures like *bhavana*, *Shodhana*, *Marana*, *Amritaikarana* by changing the physical and chemical structure of the raw material ultimately fit for internal administration. The liquid media of triphala used in the Indian alchemy. The *triphala* chemically reported as rich source of vitamin C, ellagic acid, gallic acid, chebulinic acid, bellericanin, Beta-sitosterol, ascorbic acid and flavonoids^{33,34}. Spectroscopic techniques including mass spectroscopy showed gallic acid as the major component³⁴. *Triphala* also contains about 20% tannins of both condensed and hydrolyzable type. In the fruit includes lipids, sitosterol saponins cardiac glycoside and various carbohydrates³⁵. These active chemical constituents are responsible for conversion of the *rasadravya* being used for pharmaceutically in the transformation of chemical entities. Media impregnates its active principle to the material and converts the inorganic material to organometallic or organo mineral form which is suitable for the body.

Probable frequent alteration in the particle size during *bhavana* reduction at the end may increase absorption and improve bioavailability of the drug. Sometimes media act as solvent and helps to eradicate toxic substance from the drug. Sometimes media reduces toxicity of the materials and induces desired effects. Media can increase therapeutic efficacy of the drug. Levigation process in *bhavana* helps in converting material in such a state for further proceedings. Ex: *Marana*³⁶.

Bhavana is an essential pretreatment of *marana*. It is the process of transformation of *rasavarg dravyas* by

which *shodhita* drugs are subjected for cycles of *bhavana* and *putana* (Incineration) thus transformed the efficacious, safe, absorbable, bio- assimilable form. In this transformation liquid media plays an important role which helps the process of *marana*. Metals or minerals which have undergone the process of *shodhana* are ground with specified liquid. The Process can be repeated several times and successive *bhavana* are given after complete dry of previous one³⁶.

Ancient *Ayurveda* seers had logically used specific liquid media for motto of *bhavana* in certain drugs and certain indications. Ex; *Triphala Kwath* is widely used for *bhavana* in *loha marana*. Hence in *ayurvedic* pharmaceutical preparation *Triphala kwath* is widely used in many different procedures³⁷.

CONCLUSION

In *Ayurveda Triphala* is one of the important polyherbal formulations. Instead of therapeutical use, it is also used in the pharmaceutical processing of various *rasadravyas* successfully to convert non suitable form of drugs in to suitable form.

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