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Contribution of Buddhism in Indian Alchemy

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ABSTRACT

Indian alchemy traditionally known as Rasshastra (science deal with processing of metals and minerals) is the strength of ancient Ayurveda treatment. Numerous alchemical texts were written in different era on Indian Alchemy. These books confer evidences that sole invention of this science come about in Buddhist period. Acharya *Nagarjuna* known as “Father of Iatrochemistry” was the first who discovered the metallurgy and the art of gold preparation from Mercury. As the whole world is looking forward to the remedies which heals and rejuvenate the body, Rasashastra medicine which is having curative and preventive aspect gives assurance of longer life and stability for achieving higher goals in the life. *Nagarjuna* was the great Buddhist philosopher and the most revered person after Gautam Buddha in Buddhism. He performed immense activities for the benefit of the Doctrine and human beings. He wrote many standard treatises on Indian alchemy viz. *Kakshaputatantra*, *Rasaratnakara* and *Arogyamanjari* etc. *Vrinda* and *Chakrapani Datta* are the other notable treatises of this period. *Vrindmadhava* is one who not only charted diagnostic techniques of diseases but also mentioned therapeutic uses of *Rasushadhies*. Use of *Lohadhatu* and *Mandoor* (Iron compounds and oxides) with plant based medicines are important inputs of *Vrinda* while on other hand use of *Rasparpati* in *Grahani vyadhi*(GIT disorders) was first discovered by *Chakradutta*. Use of *Loha rasayana* is also seen frequently in books by *Chakradutta*. So it can be concluded that *Nagarjuna* and his contemporaries have lifted this science of alchemy to the topmost position.

KEYWORDS

Dhatuvada, Dehavada, Nagarjuna, Chakradutta, Kakshaputatantra



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INTRODUCTION

Medicine and Meditation are the notable sources of physical and psychological healing. The greatest contribution in this regards is in Buddhist Period. Ayurveda, the ancient science of medicine is known to be progress and fulfilled in this era only. Many physician were healer in which one great Buddhist sage *Nagarjuna* of Mahayana Buddhist tradition. The major contribution of *Nagarjuna* to *Ayurveda* lives forever through his enriched work of *Ayurvedic Materia Medica*¹. *Nagarjuna* showed his excellence in Tantric procedures as well as in practise of alchemy “*Siddhe Rase Karishyaminirdaridrya jagat*” the ultimate oath taken by great *Nagarjuna* for universal healthcare. His pledge established that he is going to transform mercury in such a way so that deprivation of healthcare and wealth will be wiped out from this world. And here is the origin of Indian Alchemy introduced in ancient Ayurveda. Indian alchemy is an art of converting metals and mineral originated drugs into bio absorbable form commonly known as *Rasauahdhies* (Herbomineral medication). As Parad (Mercury) is the core of this science due to its immense therapeutic and catalytic properties, most of the formulations are named as *Rasa* and *Rasayana*. Literary meaning of *Rasa* is that

it easily get absorbed, assimilate in the body and show quick therapeutic action. *Rasayana* drugs are having preventive and curative action so that disease less condition exist throughout years in order to achieve higher aim of life. These medicines gives stability and prosperity to human body.

Indian alchemy is conventionally known as *Rasshastra* (science deal with processing of metals and minerals) is the strength of ancient Ayurveda treatment. In pre *Nagarguna* period *Ayurveda* was prospered with plant originated drugs. As these drugs are time taken action with large dose combination which sometimes may become nauseated to some patients and having short shelf life. Traditional Ayurveda treaties stressed on stability of body for achieving Moksha (Nirvana) which is the ultimate goal of life hence they realise that the drugs which are stable in nature such as minerals could be the option for firmness and disease-free state of body.

So the emergence of this science of alchemy by *Nagarguna* bought hopes to ancient *Ayurveda* *Nagarjuna* was the first who discovered the metallurgy and the art of gold preparation from mercury. He is also known as “father of iatrochemistry” because of his work on the benefits of specifically treated minerals known as *Bhasmas*. Mercury is at the heart of this



science, various processing over mercury was done by means of various organic and inorganic substances. Basically this science was evolved with the art of gold making with the help of mercury from lower cost metals such as *Tambra*(Copper) and *Vanga*(Tin) called as *Lohaveda*. Later this art was extinct with time and use of mercury was advocated for curative and preventive purposes so as to give healthy and stable state of body called as *Dhatuveda*. At this period various *Tantra siddhies* (Magical remedies) was also practiced by some *Rasacharyas* (Faculties in Rasashastra). Various diverse remedies were practiced for tantric purposes.

Although there are various Scholars who contributed in Progression of this Science, *Vrinda* and *Chakrapani Datta* are the other notable treatises of this period. Both *Vrinda* and *Chakrapani* have mentioned *Nagarjuna* as an authority, who accelerated Indian AL chemistry and unanimously looked upon as the inventor of the processes of distillation and calcinations and who also wrote many standard treatises on Indian alchemy viz. *Kakshaputatantra*, *Rasaratnakara* and *Arogyamanjari* etc. Although his role in field of education as a teacher, author and spiritual guide was scarcely mentioned in Indian literature. In this paper *Nagarjuna* and his

contemporary's contribution in Indian alchemy is been discussed

Nagarjuna²

Nagarjuna was the great Buddhist philosopher and the most revered person after Gautam Buddha in Buddhism. He performed immense activities for the benefit of the Doctrine and beings. There are different disagreements regarding duration of *Nagarjuna* in Ayurveda Texts. But in Buddhist period *Nagarjuna* is considered as a good physician who himself was a good Alchemist. *Nagarjuna* was quoted as an authority on *Rasayana*(rejuvenation therapy) by later authors such as *Vrinda* and *Chakrapani*. *Nagarjuna*, the alchemist was privileged with *Rasasiddha* (Master of mercury science) due to his mastery over alchemical procedures. Although he belongs to Brahmin family he is the follower of Mahayan Bouddha. He was also the chief of Nalanda University. It is been said that once upon a time there was a severe drought and to relive that his mentor ask him to go across the sea with the help of two pimple (*Ficus religiosa*) leaves from *Shrishaile* mountain where he resides and learn the art of gold making. As he learned that art and went back, he convert iron and copper into gold with the assistance of his friend *Sharhapa* and relieve the drought hit condition.



Nagarjuna period is considered as AD eight century. There are many books that are written by *Rasasiddha Nagarjuna* among them mainly *Kakshaputa* which is said to be in *Maghadhi* Language and its translation in Sanskrit language was with the name of *Rasendra mangal*. *Rasratnakara* is another book which is famous and recognized for alchemical procedures. Until the seventh and eighth centuries, Ayurvedic drugs consisted mainly of plant origin. Metals such as iron, silver, tin and lead were very sparingly used for medicine purposes. Use of metallic compounds particularly began with *Nagarjuna* and it increased progressively.

Books written by *Nagarjuna*

Rasendramangal³ (*Kakshaputa*)

Rasendramangal book is known to be the translation of *kakshaputa*. Although there are total eight chapters in the original book, here in *Rasamangal* only four chapters are elaborated.

First Chapter – It is introduced with *Rasaprashansha*(Significance of mercury).It is been said that in this world if one want to preserve the plant based

constituents, then mercury is the only drug that can potentiate its power for longer duration. The first chapter described *Parad Ashta sanskar* (Eight types of processing to potentiate mercury). Various *Shodhan* (Purification) methods of metals such as Iron, Copper, Tourmaline, Tin, *Hingool*, *Abhrak*(Mica) has been explained in this chapter.

Second Chapter-Second chapter clarified various method of *Satwapatana*(extraction of metals from its ore).It also described seven procedures for melting of Diamond and kimberlite. The chapter enlisted single minerals and its compound incineration process i.e. converting metals into irreversible state called *Bhasma*. These metals after proper incineration achieve the state of *Rasibhavanam* i.e. colloidal state. It protect from diseases by improving immunity and stop degeneration process hence stop aging.

Third Chapter- There are number of Formulation designed for almost all disease condition. These formulations are enlisted in tabular form in table 1.

Table 1 Formulations with main contents and Therapeutic uses

Sr.n	Formulations	Main contents	Therapeutic uses
1	<i>Swachhandabhairava Rasa</i>	Purified Sulphur, Orpiment ,Pyrite etc.	Pacify Durdhar vata
2	<i>Tikshna mukh rasa</i>	Purified mercury	Pacify pitta dosha
3	<i>Manthan Bhairav Rasa, Gagangarbha rasa, Kantavallabh rasa,</i>	Purified mercury, purified Realgar ,Tambra(Copper)bhasma, Kantabhasma,Abhrak Bhasma etc	Kaphavatvikar, kaphanwit Pittavikar



4	<i>Jaymangal Ras</i> <i>Nagendra Rasa</i> <i>Gajendra Rasa</i>	Sulphur, Orpiment, Pyrite Pittal, Abhrak(Mica) Bhasma tc.	Sannipatik Awashtha(In unconscious state)
5	<i>Wadwamukh Rasa</i>	Purifiedmercury.Incinerated copper ,Jwalamukh Rasa	Postpartum complaints
6	<i>Sutavati</i>	Gandhak(Sulphur),Abhrak(Mica),Realgar,Copper Iron etc.	Post accidental complication
7	<i>Sarvajimaharo Rasa</i>	Sulphur Pishti, Different salts, piper longum etc.	Appetizer
8	<i>Gandhakadyarasoajurnyaha ro</i>	Sulphur,Abhrak(Mica),Tikshnaloha, Mercury etc.	Indigestion
9	<i>Meghnad Rasa,Simhanado rasa</i>	Kasya(Brass),gandhak(Sulphur)	Pittaj jwara(Fever)
10	<i>Khagendra Ras</i> <i>Dardurakakhya rasa</i>	Tikshna loha(Type of Iron) Parad Charan	Diarrhea Dysentery and GIT disorders
11	<i>Mrugank Rasa</i>	Iron, Mercury etc.	Hemoptysis
12	<i>Krishnawarna</i> <i>Rasabhasma,Raktawarna</i> <i>Rasabhasma,Valipalithara</i> <i>Yoga,Hemsuta Rasa etc</i>	Black Bismuth, yellow Sulphur	Rejuvenative Aging
13	<i>Sankoch Golak</i> <i>Rasa,Raktavikarhar rasa,</i> <i>Kakankushtahar</i> <i>Rasa,Parpati rasa etc</i>	Liquid Sulphur with mica ,mercury and poison	Skin Diseases
14	<i>Trishna chardihara Bhasma</i>	Orpiment,Tapya(Pyrite),Gandhak(Sulphur) pishti	Thirst vomiting
15	<i>Shulba Pishti</i>	Tuttha(Copper Sulphate),Tambra(Copper)	Difficulty in Micturition
16	<i>Trivishpisthak Rasa</i>	Sulphur, Silver, Copper along with herbs	Heart diseases
17	<i>Hemshulbapishika</i>	Gold, Visha, Anjana(Corrilyum) etc	Unmada(psychological disorder)
18	<i>Shulbajirna Rasa</i> <i>Tikshajirna Rasa</i> <i>Kantjirna Rasa etc.</i>	Tambra, Souviranjana(Type of Corrilyum) etc	Ophthalmic disorders
19	<i>Kanthamaya Rasa</i> <i>Shirorogahar Rasa</i>	Vimala, Samudranamak(Common Salt) etc.	ENT disorders
20	<i>Dwijendra Rasa</i>	Abhrak, Talak, Pyrite, Mainshil,shilajatu etc	Antagonistic to toxins
21	<i>Yonidosharo Rasa</i>	Murcury, Sulphur, Rajat etc	Gynecological disorders

Chapter four-Chapter four is based on various magical remedies such as *Hembaddha gutica*, *Vyaghri gutica* which claims supernatural powers. *Vajrabaddha Gutica* is claim to resolve all types of problems and gives success when kept in mouth. *Divydehaprada Ras* claim to relieve from aging process and disease free condition. The chapter also contain

different types of remedies which has prodiac action. Procedure regarding *Lohavedh* (converting metals into gold) are described in order to convert metals and minerals into Gold and silver.

Rasaratnakara⁴

Rasaratnakara was written by *Nagarjuna*. From the internal evidence of this book, it appears, it is a work composed after the



time of *Vagbhata* i.e., in the eighth century. It is divided into five parts namely 1. *Rasakhand*, 2. *RasendraKhanda*, 3. *Rudhiwadi* 4. *Rasayana*

Khanda, 5. *Mantra Khanda*, This book is in the form of *Upadesh* (Guidance) in ten parts (table 2).

Table 2 Chapters and Guidelines

Sr no	Guidance chapters	Guidelines
1	<i>Prathamapadesh</i>	Importance of Mercury and its therapeutic preparations, Mercury <i>dosha</i> (drawbacks)
2	<i>Dwitiyapadesh</i>	Incineration process of Mercury, <i>Ashtadosh nivarana vidhi</i> (Process of eight detriments of mercury)
3	<i>Tritiyapadesh</i>	<i>Jarana vidhi</i> (Advance processing of mercury in order to digest any metal)
4	<i>Chaturthapadesh</i>	Various dosage form of mercury, properties of various mercury incinerated dosage forms
5	<i>Panchamapadesh</i>	Description of various minerals, its purification and properties, purification and incineration of Diamond and Tourmaline
6	<i>Shashtapadesh</i>	Various processing of <i>Abhrak</i> (Mica) for therapeutic uses
7	<i>Saptamapadesh</i>	Purification of <i>Hartal</i> (Orpiment), <i>Manashila</i> (Realgar), <i>Tutha</i> (Copper Sulphate) <i>Makshik</i> (Pyrite) <i>Pravala</i> (Coral), <i>Shakha</i> , <i>Hingul</i> (Cinnabar) etc.
8	<i>Ashtamapadesh</i>	Types and Synonyms of <i>Loha</i> (Iron Oxide), Purification and Incineration
9	<i>Navamapadesh</i>	<i>Kantaloha</i> , its types, purification and incineration, <i>Amrutikarana</i> its therapeutic effects
10	<i>Dashamapadesh</i>	Various types of plant based and animal based toxins, its properties and drawbacks and therapeutic uses.

Rasaratnakara deals with the preparation and use of metallic compounds, more particularly of mercury (*rasa*). It describes certain recipes in which vegetable or animal products are used to transform other metals into compounds which look like gold and could be passed off as gold. These compounds, particularly of mercury, were prepared and used in order to make the body eternal and strong.

Vrrunda⁵

He is also known as *Vrrunda Madhava*. His tenure could be in 7 to 11 century AD. He has written a book named “*Siddhayoga Sangraha*” where he mentioned therapeutic dosages form of some *Rasakalpa* such as

Mandoorvatika, *Shatavari* *Mandoor*, *Gudamandoor* *Dhatriloha* along with other Plant based preparations. He also mentioned *Nagarjuna* quoted *Anjan vartika* (dosage form for local application for ophthalmic disorders)

Chakradutta⁶

Chakrapaniyadatta has written a book named *Chikitas Sangraha* on the basis of *Siddhayoga sangraha* in 11th century BC. He has remarkable contribution in *Rasashatra* medicines. Although evolution of *Rasaparpati* (Dosage form of Mercurous sulphide) was first discovered by *Nagarjuna* at eighth century for *Kushta*(Skin diseases) but use of



Rasparpati in *Grahani vyadhi* (GIT disorders) was first discovered by *Chakradutta*. Also *Rasagutica* in Piles, *Rasendragutica* in Tuberculosis, *Kajjali* in Measles etc. are other main inputs of *Chakradutta*. Along with mercurial

preparation he also used various metal and mineral based dosage form specially *Loha Rasayana* which are based on theory of *Lohashastra* (Science of Iron compound) of *Nagarjuna*. Some of the remedies are enlisted in table 3.

Table 3 List of diseases and Metal based remedies

Sr.no	Diseases	Metallic based Remedies
1	<i>Arsha</i> (Piles)	<i>Agnimukh loha, Bhallatak loha</i>
2	<i>Pandu</i> (Anaemia)	<i>Navayas loha, Punarnava Mandoor</i>
3	<i>Rajyakshma</i> (Tuberculosis)	<i>Tapyadi loha</i>
4	<i>Shula</i> (Abd.Pain)	<i>Loha Bhasma</i>
5	<i>Parinamshul</i> (Duodenal ulcer)	<i>Dhatriloha, Shatavari Mandoor</i>
6	<i>Stholya</i> (Obesity)	<i>Vidangadi Loha, Loharasayana</i>
7	<i>Kushta</i> (Skin disorders)	<i>Navayas Rasayana</i>
8	<i>Netraroga</i> (Ophthalmic disorders)	<i>Sisak Shalaka (Lead applicator)</i>
9	<i>Rasayana</i> (Rejuvenation)	<i>Abhrak Bhasma, Tambra Bhasma</i>
10	<i>Garbhadharan</i> (conception)	<i>Swarna Rajatadi Yoga</i>
11	<i>Balroga</i> (paediatrics)	<i>Swarna Gairik</i>

Chakradutta also mentioned *Mrugashringa Bhasma* (Ash of deer horn) for heart and lumber pain. There various magical and unique preparations which have plant based and animal based constituents.

DISCUSSION

From above literature, it is clear that Buddhist period was prospered with different faculties. Out of which Indian alchemy has given strength to the ancient medicine system i.e. Ayurveda. *Nagarjuna* and other treatise enormous contribution has lift this science in advanced place. His quest make him to proceed for research and to learn art of Gold making Hence the Journey starts with the aim of *Lohavada* to prosper realm. As the basis of Buddhist

philosophy is to achieve Nirvana. The goal of human existence is to stay healthy and stable to accomplish nirvana. so the *Dehavada* has originated with numerous pharmaceutical preparation in order to help mankind for long life and disease Free State.

The first text written by *Nagarjuna* i.e. *Kakshaput* which is known to translate in Sanskrit is *Rasendra Mangal*. Only first four chapter was explained in the book. First two chapter are regarding different Processing techniques of Rasa (*Parad*) which shows that very minute toxicity study of *Parada* and hence advocated its solutions by making *Parad Ashtasanskara*. The Purification of various metals and minerals along with its incineration process



was described indicate that use of metallic preparations were famous at that time. The science of nanotechnology was at progress because these dignitaries have knowledge of colloidal state of substance by repeated incineration called *Putra* so that it can absorb in body. Third chapter contain full of herbo mineral Preparation which act on all systems of body which directs that *Rasashastra* was flourished at that time (Table: 1). Chapter four is related to various mystic remedies claimed of gaining supernatural power. It also described remedies regarding *Rasayana* which can control aging process and medications to boost sexual power. The chapter also related to various alchemical processes for making of gold and silver from other cheap metals.

Rasaratnakar was another book written by *Nagarjuna* which is in form of guidance and is divided in ten parts. It mainly focused on Mercury processing and purifications techniques of other metals. *Jarana* and *Amrutikarana* are the important processing techniques described in this book i.e. for potentiation of mercury and removing residual traces of impurities in Incinerated Metals and minerals respectively. This book also explained various animal and plant based poisonous substances along with its purification techniques and therapeutic uses. So one can say that

Rasaratnakar book is one of the best book for Pharmaceutical and therapeutic practices of *Rasushadhies*. (Table: 2)

Vrindmadhava is one who not only charted diagnostic techniques of diseases but also mentioned therapeutic uses of *Rasushadhies*. Use of *Lohadhatu* and *Mandoor* (Iron compounds and oxides) with plant based medicines are important inputs of *Vrinda*. It shows that clinical approach of these people was so strong that they are well aware of easy assimilation of oxides i.e. *Mandoor* as compare to iron itself.

Chakrapani is another admirable personal in Buddhist period who first explored use of *Rasaparpati* in *Grahani Vyadhi*, the disease in which commonly whole function GI tract is disturbed. Judicial use of *Parpati* along with dietary control definitely relive this ailment beside its complications. Apart from this *Chakrapani* also mentioned patent formulation on major diseases and rejuvenation therapy. Use of *Loha rasayana* is also seen frequently in Books by *Chakradutta*. It shows that these people were very well aware about physiological role of metals and allied trace element in the body. (Table: 3)

Hence it is evidenced that origin of Indian Alchemy was started from Buddhist period and it then flourished and spread across country by Buddha Sages.



CONCLUSION

It can be concluded by following highlights

- In pre Buddhist period basically use of plant based drug was advocated and mercury and metals in medicine are scarcely used.
- Due to historic oath taken by *Nagarjuna* to relive from dearth condition, *Rasshastra* was evolved.
- With intention of Making gold from low valued metals (*Lohavada*) it is then employed for Curing mankind for achieving ultimate goal of life.
- *Nagarjuna* and his contemporaries have lifted this science of alchemy to the topmost position.
- To conclude Contribution of this science by Buddhist sages boosted ancient medicine system, Ayurveda.



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