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Review on *Mana Paribhasha* (Units of Measurement) and its Significance W S R to Various *Ayurveda* Classical texts

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ABSTRACT
Mana (Study of Measurement/ calculation) can be considered as the mother of all sciences. It is used as a tool that helps to understand and solve the problems of every science. It may be any Science like Medicine, Engineering or any other Natural sciences; the aid of mathematics is inevitable. In Ayurveda also most of the classical texts like Brihatrayee and many of the classical texts related to Rasashastra Evam Bhaishajya Kalpana have mentioned and highlighted the importance of Mana (Units of Measurement). Without the help of this better understanding of the subject matter is incredible. Hence in this article an attempt has been made to highlight the significance of learning Mana Paribhasha and gathered some references on Mana Paribhasha(Units of Measurement) mentioned in certain Ayurveda classics.
Keywords: Mana, Brihatrayee, Rasashastra, Bhaishajya Kalpana, Ayurveda

INTRODUCTION
The word meaning of *Mana* denotes the means through which a material (thing) can be measured (estimated).
'मीयतेअनेन इति मानम्□(श.क.द्रु) [1]
In *Ayurveda*, several means of measurements are found with respect to the measurement of Mass, Length, Volume and Time. Briefly the application of these measurement units in various branches of *Ayurveda* are as shown in the below table:
Hence, *Mana* is an integral part of all the subjects of *Ayurveda* and in support to this statement, we can find the word *Mana* in the definition of *Ayurveda* itself wherein it is mentioned that *Mana* is used for the measurement of life*.*
हिताहितं सुखं दुःखमायुस्तस्य हिताहितम् □
मानं च तच्च यत्रोक्तमायुर्वेदः स उच्यते□४१ □(च. सु. १) [2]
In addition to this there is another reference in *Caraka Samhita* which signifies about the *Matra/Mana* (Dosage) as one of the important aspects for the successful treatment outcome.
मात्राकालाश्रया युक्तिः सिद्धिर्युक्तौ प्रतिष्ठिता □
तिष्ठत्युपरि युक्तिज्ञो द्रव्यज्ञानवतां सदा ॥(च. सु. २) [3]
In the similar manner there are some more references which specify the importance of *Mana* are,
परिमाणं विना क्वापि नागदाज्जायते फलम् □
तस्मात् सर्वे यतन्तेऽत्र परिमाणविधौ सदा □७□(वैद्यक परिभाषा प्रदीप) [4]
The better results of any treatment cannot be anticipated if the dosage of the medicine given is incorrect. Because of the greater importance of *Mana* in the field of medicine, most of the classics of *Ayurveda* have always explained *ManaParibhasha* at the beginning of the text.
न मानेन विना युक्तिर्द्रव्याणां जायते क्वचित् □
अथःप्रयोगकार्यार्थं मानमत्रोच्यते मया □८□(वैद्यक परिभाषा प्रदीप)
Without the knowledge of *Mana(Dosage)*, the judicious use of medicine (*Yukti Poorvaka Dravya Prayoga*) is not at all possible. So, the knowledge of *Mana* is highly essential while using the *Dravya* for *Ausadha Nirmana*or *Prayoga*.

मानापेक्षितमाचार्या भेषजानां प्रकल्पनम्
मेनिरे यत्ततोमानमुच्यते पारिभाषिकम् ॥इति ॥(वैद्यक परिभाषा प्रदीप)

Scholars of *Ayurveda* have given importance to *Mana Paribhasha* as it is essential for designing formulations.

Materials and Methods

An extensive literary search has been made to compile the *Mana Paribhasha* from various Classical texts of *Ayurveda* and the texts related to *Rasashastra Evam Bhaishajya Kalpana*. They are mentioned in the below tables.

Sl No	Subjects	Application of *Mana*
1	*Rachana Sharira*	To Measure various bodily constituents
2	*Kriya Shareera*	To Quantify the *Dosha, Dhatu, Mala.*
3	*Dravya Guna*	To define *Dravyas* in *Paribhasha*. Eg.*Triphala, Dashmula*,etc.
4	*Rasashastra&BhaishajyaKalpana*	Related to Drug manufacture at various levels.
5	*Roganidana*	To know the *TaraTama Bhava* of the *Doshas*
6	*Agada Tantra*	For deciding the fatal dose of *Visha Dravyas* etc.
7	*Swasthavritta*	To understand *Yoga, Dincharya, Ritucharya* etc.
8	*Kaumarabritya*	To Fix the Dosage for children according to Age
9	*Prasuti Tantra Evam Streeroga*	To understand anatomical and physiological variations in females and to fix the dosage.
10	*Kayachikitsa*	Classification and Treatment of diseases, dosage fixation, etc.
11	*Pancakarma*	To decide the dosage of medicine for *Vamana, Virechana*, etc and to design equipments for various procedures.
12	*Shalya Tantra*	To prepare *Yantra, Shastras* and in various *Shastra Karmas.*
13	*Shalakya Tantra*	To decide the dosage and timing of medications in *Kriyakalpa.*

❖ **According to *Acharya Charaka* [5](*Ch. Ka*. 12/87-97)**

षड् ध्वंश्यस्तु मरीचिः	6 *Dhwanshi*= 1 *Marichi*
षण्मरीच्यस्तु सर्षपः	6 *Marichi* = 1 *Sarshapa*
अष्टौ ते सर्षपाारक्तास्तण्डुल	8 *Rakta Sarshapa*= 1 *Tandula*
तण्डुलश्चापितद् द्वयंधान्यमाषोभवेदेको	2 *Tandula*= 1 *Dhanya Masha*
धान्यमाषद्वयं यवः	2 *Dhanya Masha* = 1 *Yava*
अण्डिका ते तु चत्वार	4*Yava*= 1 *Andika*
ताश्चतस्तस्तु माषकः	4 *Andika* = 1 *Mashaka*(*Hema, Dhanyaka*)
भवेच्छाणस्तु ते त्रयः	3 *Mashaka* = 1 *Shana*
शाणौ द्वौ द्रङ्क्षणं विद्यात्	2 *Shana* = 1 *Drankshana* (*Kola,Badara*)
विद्यात् द्वौ द्रङ्क्षणौ कर्ष	2 *Drankshana* = 1 *Karsha* (*Suvarna, Aksha, Bidalpadaka, Pichu, Panitala, Tinduka, Kavala graha*)
द्वे सुवर्णे पलार्ध	2 *Suvarna* = ½ *Pala*(*Sukti, Astamika*)
द्वे पलार्धे पलं	2 *ArdhaPala*= 1 *Pala*(*Musti, Prakuncha, Chaturthika, Bilva, Shodashika, Amra*)
द्वे पले प्रसृतं विदुः	2 *Pala* = 1 *Prasruta*(*Astamana*)
पलं चतुर्गुणं विद्यादञ्जलिं कुडवं तथा	4 *Pala* = 1 *Anjali/ 1 Kudava*
कुडवौ द्वौ तु मानिका	2 *Kudava*= 1 *Manika*
चत्वारः कुडवाः प्रस्थ	4 *Kudava*= 1 *Prastha*
चतुःप्रस्थमथाढकम्	4 *Prastha* = 1 *Adhaka* (*Patra, Kansa*)
कंसश्चतुर्गुणो द्रोण	4 *Kansa* = 1 *Drona* (*Armana, Nalvana, Kalasha, Ghata, Unmana*)
द्रोणस्तु द्विगुणः शूर्पो	2 *Drona* = 1 *Surpa* (*Kumbha*)
गोणीं शूर्पद्वयं	2 *Surpa* = 1 *Goni*(*Khari, Bhara*)
द्वात्रिंशतं विजानीयाद्वाहं शूर्पाणि बुद्धिमान्	32 *Surpa* = 1 *Vaha*
तुलां शतपलं विद्यात्	100 *Pala* = 1 *Tula*

According to *Sushruta Acharya*: [6] (*Su. Chi.*31/7)

तत्र द्वादश धान्यमाषा मध्यमाः सुवर्णमाषकः	12 *Dhanya Masha*= 1 *Suvarna Masha*
ते षोडश सुवर्णम्	16 *Suvarna Masha*= 1 *Suvarna* (*Karsha*)
OR	
मध्यमनिष्पावा एकोनविंशतिर्धरणं	19 *Nishpava*= 1 *Dharana*
तान्यर्धतृतीयानि कर्षः	2 ½ *Dharana*=1 *Karsha*
ततश्चोर्ध्वं चतुर्गुणमभिवर्धयन्तः पलकुडवप्रस्थाढकद्रोणा इत्यभिनिष्पद्यन्ते	From *Karsha*further *Mana*will be in multiples of 4 i.e. as mentioned below:
	4 *Karsha* = 1 *Pala*
	4 *Pala* = 1 *Kudava*
	4 *Kudava*= 1 *Prastha*
	4 *Prastha*= 1 *Adhaka*
	4 *Adhaka*= 1 *Drona*
तुला पुनः पलशतं	100 *Pala*= 1 *Tula*
ताः पुनर्विंशतिभिरः	20 *Tula* = 1 *Bhara*

According to *Astanga Sangraha* [7](*As. San. Ka.* 8/17)

षड्वंश्यो मरीचिः	6 *Vanshi*=1 *Marichi*
ताः षट्सर्षपः	6 *Marichi*= 1 *Sarshapa*
तेऽष्टै तण्डुलः	8*Sarshapa*=1*Tandula*
तौ धान्यमाषः	2*Tandula*= 1*DhanyaMasha*
तौ यवः ॥	2*DhanyaMasha*= 1*Yava*
अतः परं चतुर्गुणवृद्ध्याऽण्डिकामाषकशाणकर्ष-पलकुडवप्रस्थाऽढक-द्रोणवहाः कल्प्यन्ते	*Andika, Mashaka, Shana, Karsha, Pala, Kudava,Prastha, Adhaka, Drona* will increase four times respectively i.e.,4 *Yava*= 1 *Andika*
माषकस्य पर्यायो हेमोधान्यकश्च	4 *Andika*= 1 *Mashaka* (*Hema, Dhanyaka*)
शाणद्वयस्य पर्यायो द्रङ्क्षणः कोलो वटकश्च	4 *Mashaka*= 1 *Shana* 2 *Shana* = 1 *Drankshana* (*Kola, Vataka*)
कर्षद्वयस्य शुक्तिरष्टमिका च ॥	4 *Shana* = 1 *Karsha*(*Suvarna, Aksha, Pichu, Bidalapadaka, Panitala, Tinduka, Kavalagraha, Shodashika*) 2 *Karsha*= 1 *Sukti*(*Astamika*)
पलद्वयस्य प्रसृतोऽष्टमानं च	4 *Karsha*= 1 *Pala*(*Musti, Prakunch, Chaturthika, Bilva*) 2 *Pala*= 1 *Prasrut*(*Astamana*)
कुडवद्वयस्य मानिका	4 *Pala*= 1 *Kudava*(*Anjali*) 2 *Kudava*=1 *Manika*
	4 *Kudava*= 1 *Prastha* 4 *Prastha*=1 *Adhaka*(*Patra, Kansa*)
द्रोणद्वयस्य शूर्पः	4 *Adhaka*= 1 *Drona* (*Nalvana, Armana, Unmana, Ghata, Kumbha, Kalasha*) 2 *Drona* = 1 *Surpa*
तुला पुनः पलशतम्	100 *Pala*= 1 *Tula*
तानि विंशतिभिर इति	20 *Tula*= 1 *Bhara*
Note:	
धरणं तु पलस्य दशमो भागः	*Dharana*=1/10th part of *Pala*

According to *AstangaHridaya*: [8] (*A. H. Ka.* 6/24(1)- 28)

षड्वंश्यस्तु मरीचि	6 *Vanshi*= 1 *Marichi*
षण्मरीच्यस्तु सर्षपः	6 *Marichi*=1 *Sarshapa*

तण्डुलः सर्षपास्त्वष्टौ	8 *Sarshapa*=1*Tandula*
धान्यमाषस्तु तौ	2 *Tandula*= 1 *DhanyaMasha*
तौ यवः ॥	2 *DhanyaMasha*= 1 *Yava*
तावण्डिका...|	4 *Yava*= 1 *Andika*
चतुर्भिस्तैर्माषकः	4 *Andika*= 1 *Mashaka*
शाणकस्तथा		4 *Mashaka*= 1 *Shana*
द्वो शाणौ वटकः ...|	2 *Shana* = 1 *Vataka*(*Kola, Badara,Drankshana*)
तौ अर्क्षं...|	2 *Vataka* =1*Aksha*(*Pichu, Panitala,Suvarna, Kavalagraha, Bidalapadaka,Karsha,Tinduka, Panimanika*)
शुक्तिरष्टमिकापिचू	2 *Pichu*= 1 *Sukti*(*Astamika*)
पलं प्रकुञ्चो बिल्वं च मुष्टिराम्रं चतुर्थिका	2 *Sukti*=1 *Pala*(*Prakuncha, Bilva, Musti, Amra, Chaturthika*)
द्वे पले प्रसुत	2 *Pala*= 1*Prasruta*
तौद्वावञ्जलि	2 *Prasruta* = 1*Anjali*
तौतु मानिका	2 *Anjali* =1 *Manika*
	Adhaka = *Bhajana, Kansa.* *Drona* = *Kumbha, Ghata, Armana*
तुला पलशतं	100 *Pala*= 1 *Tula*
तानि विंशतिर्भिर उच्यते	20 *Tula*= 1 *Bhara*

According to *Rasarnava* [9] (10thPatala 32-35)

षट्त्रुटयकश्च लिक्षा	6 *Truti*=1 *Liksha*
षट्लिक्षा यूक एव च|	6 *Liksha*= 1 *Yuka*
षट्यूकास्तु रजःसञ्ज्ञाः...		6 *Yuka*= 1 *Raja*
षड् रजः सर्षपः साक्षात् सिद्धार्थः स च कीर्तितः		6 *Raja*= 1 *Sarshapa*(*Siddhartha*)
षट्सिद्धार्थाश्च देवेशि	यवस्त्वेकः प्रकीर्तितः	6 *Siddhartha*= 1 *Yava*
षड् यवैरेकगुञ्जा		6 *Yava*= 1 *Gunja*
स्यात् षड्गुञ्जाश्चैकमाषकः		6 *Gunja* = 1 *Masha*
माषा द्वादश तोलः	12*Masha*= 1 *Tola*
अष्टौ तोलाः पलं भवेत्	8 *Tola*= 1 *Pala*
द्वात्रिंशत्पलकं देवि! शुभन्तु परिकीर्तितम्|	32 *Pala*= 1 *Shubha*
शुभस्य तु सहस्त्र द्वे भार एकः प्रकीर्तितः	2000 *Shubha*= 1 *Bhara*

According to *Sharangadhara*: [10] (*Purvakhanda*1/15- 31)

त्रसरेणुर्बुधैः प्रोक्तस्त्रिंशता परमाणुभिः ॥	30 *Parmanu*= 1 *Trasarenu*(*Vanshi*)
षड्वंशीभिर्मरीचिः स्यात्	6 *Vanshi* = 1 *Marichi*
ताभिः षड्भिस्तु राजिका		6 *Marichi* = 1 *Rajika*
तिसृभी राजिकाभिश्च सर्षपः	3 *Rajika* = 1 *Sarshapa*
यवोऽष्टसर्षपैः प्रोक्तो	8 *Sarshapa* = 1 *Yava*
गुञ्जा स्यात्तच्चतुष्टयम्|	4 *Yava*= 1 *Gunja* (*Ratti*)
षड्भिस्तु रक्तिकाभिः स्यान्माषकोहेमधान्यकौ॥	6 *Ratti* = 1 *Masha*(*Hema, Dhanyaka*)
माषैश्चतुर्भिः शाणः स्याद्धरणः स निगद्यते |टङ्कः स एव.. ॥	4 *Masha* = 1 *Shana* (*Dharana,Tanka*)
तद्द्वयंकोल उच्यते ॥ क्षुद्रको वटकश्चैव द्रङ्क्षणः स निगद्यते ॥	2 *Shana* = 1 *Kola*(*Kshudraka, Vataka, Drankshana*)
कोलद्वयं च कर्षः स्यात् ...॥	2 *Kola*= 1 *Karsha*(*Panimanika, Aksha, Pichu, Panitala, kinchitpani, Tinduka, Bidalapadaka, Shodashika,*

	Karmadhya, Hamsapada, Suvarna, Kavalagraha, Udumbara)
स्यात्कर्षाभ्यामर्धपलं शुक्तिरष्टमिका तथा ॥	2 Karsha= 1 ArdhaPala(Sukti, Astamika)
शुक्तिभ्यां च पलं...॥	2 Sukti = 1 Pala(Musti, Amra, Chaturthika, Prakuncha, Shodashi, Bilva)
पलाभ्यां प्रसृतिर्ज्ञेया प्रसृतश्च निगद्यते ॥	2 Pala = 1 Prasruti (Prasruta)
प्रसृतिभ्यामञ्जलिः स्यात् कुडवोऽर्धशरावकः	अष्टमानं च स ज्ञेयः...॥	2 Prasruta = 1 Anjali (Kudava,Ardhasarava, Astamana)
कुडवाभ्यां च मानिका॥शरावोऽष्टपलंतद्ज्ञेयमत्र विचक्षणैः		2Kudava= 1 Manika(Sharava,Astapala)
शरावाभ्यां भवेत् प्रस्थ....॥	2 Sharava= 1 Prastha
चतुःप्रस्थैस्तथाढकम् ॥ भाजनं कंसपात्रं च चतुःषष्टिपलं च तत्		4 Prastha = 1 Adhaka (Bhajana, Kansa, ChatushastiPala)
चतुर्भिराढकैर्द्रोणः .....॥	4Adhaka= 1 Drona (Kalasha, Nalvana,Armana,Unmaana, Ghata, Rasi)
द्रोणाभ्यां शूर्पकुम्भौ	2 Drona = 1 Surpa (Kumbha,Chatushasti Sharava)
शूर्पाभ्यां च भवेद् द्रोणी वाही गोणी च सा स्मृता	2 Surpa =1 Droni (Vahi, Goni)
द्रोणीचतुष्टयं खारी...| चतुःसहस्त्रपलिका षण्णवत्यधिका...	4 Droni = 1Khari(1 Khari = 4096 Pala)
पलानां द्विसहस्त्रं च भार एकः प्रकीर्तितः॥	2000 Pala= 1 Bhara
तुला पलशतं ज्ञेया सर्वत्रैवैष निश्चयः		100 Pala=1 Tula

According to R.R.S. [11] (11/1-9)

त्रुटिः स्यादणुभिः षड्	6 Anu = 1 Truti
तैर्लिक्षा षड्भिरीरिता	6 Truti= 1 Liksha
ताभिः षड्भिर्भवेद्यूकः	6 Liksha= 1 Yuka
षड् यूकास्तद्रजः स्मृतम्॥	6 Yuka= 1 Raja
षड्रजः सर्षपः प्रोक्त	6 Raja= 1 Sarshapa
तैः षड्भिर्यव ईरितः		6 Sarshapa= 1 Yava
एका गुञ्जा यवैः षड्भि	6 Yava= 1 Gunja
निष्पावस्तु द्विगुञ्जकः ॥	2 Gunja = 1 Nishpava
स्यादगुञ्जात्रितयं वल्लो	3 Gunja = 1 Valla
द्वौ वल्लौ माष उच्यते		2 Valla= 1 Masha
द्वौ माषौ धरणं	2 Masha= 1 Dharana
ते द्वे शाणनिष्ककलाः स्मृताः ॥	2 Dharana= 1 Shana (Nishka, Kala)
निष्कद्वयन्तु वटकः	2 Nishka= 1 Vataka (Kola)
स्यात्कोलद्वितयं तोलः	2Kola= 1 Tola
कर्षो निष्कचतुष्टयम् ॥	4 Nishka=1 Karsha(Udumbara, Panitala, Suvarna, Kavalagraha, Aksha, Bidalapadaka)
शुक्तिः पाणितलद्वयम् ॥	2 Panitala= 1 Sukti
शुक्तिद्वयं पलं केचिदन्ये शुक्तित्रयं विदुः		2 Sukti= 1 Pala (*3 Sukti= 1 Pala) (Musti, Prakuncha, Bilva) Note:*According to some authors, 3 Sukti= 1 Pala.
पलद्वयं तु प्रसृतं	2 Pala = 1 Prasruta
तद् द्वयं कुडवोऽञ्जलिः		2 Prasruta= 1 Kudava(Anjali)
कुडवौ मानिका	2 Kudava= 1 Manika
स्यात्प्रस्थो द्वे मानिके स्मृतः ॥	2 Manika= 1 Prastha
प्रस्थद्वयं शुभं	2 Prastha= 1 Shubha
तौ द्वौ पात्रकाह्वयमाढकम्		2 Shubha = 1Patrak(Adhaka)

तैश्चतुर्भिद्रोण	4 *Adhaka*= 1*Drona* (*Ghata, Unmana,Nalvana, Armana, Kumbha*)
पलानां शतकं तुला	100*Pala*= 1 *Tula*
चत्वारिंशत्पलशततुला भारः प्रकीर्तितः ॥	4000 *Pala*/40 *Tula*= 1*Bhara*

According to AFI/API [12]

8 *Ratti*= 1 *Masha*	1 gm
12 *Mashas*=1 *Karsha (Tola)*	12 gm
2 *Karsha(Tola)*= 1 *Sukti*	24 gm
2 *Sukti*(4 *Karshas* or *Tola*) = 1 *Pala*	48 gm
2 *Pala*= 1 *Prasruti*	96 gm
2 *Prasruti* = 1 *Kudava*	192 gm
2 *Kudava*= 1 *Manika*	384 gm
2 *Manika* = 1 *Prastha*	768 gm
4 *Prastha*= 1 *Adhaka*	3 kg 73 gm
4 *Adhaka*= 1 *Drona*	12 kg 228 gm
2 *Drona* = 1 *Surpa*	24 kg 576 gm
2 *Surpa* = 1 *Droni* (*Vahi*)	49 kg. 152 gm
4 *Droni* = 1 *Khari*	196 kg 608 gm
100 *Pala*= 1 *Tula*	4 kg 800 gm
20 *Tula* = 1 *Bhara*	96 kg

According to *Rasendra sara Sangraha* [13] (*Parishitam*2-16)

षट् सर्षपैर्यव	6 *Sarshapa*= 1 *Yava*	40 mg
गुञ्जैका तु यवैस्त्रिभिः	3 *Yava*= 1 *Gunja*	125 mg
माषस्तु पञ्चभिः षड्भिस्तथा सप्तभिरष्टभिः दशभिर्द्वादशभिश्च रक्तिभिःषड्विधो मतः	5,6,7,8,10,12 *Ratti*=1 *Masha*	1 gm
माषैश्चतुर्भि शाणः स्याद्धरणं तन्निगद्यते टङ्कः स एव कथित...	4 *Masha*=1 *Sana*(*Dharan, Tanka*)	3-4 gm
तद् द्वयं कोल उच्यते	2 *Sana*= 1 *Kola*(*Kshudraka, Drankshana, Vataka*)	6 gm
कोलद्वयश्च कर्षः स्यात् ...॥	2 *Kola*= 1 *Karsha* (*Panimanika, Aksha, Pichu, Panitala, KinchitPani, Tinduka, Bidalapadaka, Shodashika, Karmadhya, Hamsapada, Suvarna, Kavalagraha, Udumbara*)	12 gm
स्यात् कर्षाभ्यामर्द्धपलं शुक्तिरष्टमिका तथा ॥	2 *Karsha*= 1 *ArdhaPala*(*Sukti, Astamika*)	24 gm
शुक्तिभ्याश्च पलं ज्ञेयं...	2 *Sukti* = 1 *Pala*(*Musti, Amra, Chaturthika, Prakuncha, Shodashi, Bilva*)	48gm
पलाभ्यां प्रसृतिर्ज्ञेया प्रसृतश्च निगद्यते	2 *Pala* = 1 *Prasruti* (*Prasrut*)	96 gm
प्रसृतिभ्यामञ्जलिः स्यात् कुडवोऽर्द्धशरावकः । अष्टमानश्च स ज्ञेयः...॥	2 *Prasrut*= 1 *Anjali* (*Kudava,Ardhasarava, Astamana*)	192 gm
कुडवाभ्याश्च माणिका शरावोऽष्टपलं तद्ज्ञेयमत्र विचक्षणैः	2 *Kudava*= 1 *Manika*(*Sharava, Astapala*)	384 gm
शरावाभ्यां भवेत् प्रस्थ....॥	2 *Sharava*= 1 *Prastha*	768 gm
चतुःप्रस्थैस्तथाढकम् भाजनं कंसपात्रे च चतुःषष्टिपलश्च तत्	4 *Prastha* = 1 *Adhaka* (*Bhajana, Kansa, Patra, ChatushastiPala*)	3.073 kg
चतुर्भिराढकैर्द्रोणः	4 *Adhaka*= 1 *Drona* (*Kalasha, Nalvana, Armana,Unmaana, Ghata, Rasi*)	12.288 kg

द्रोणाभ्यां शूर्पकुम्भौ च चतुःषष्टिशरावकः	2 Drona = 1 Surpa (Kumbha, ChaturshastiSharava)	24.576 kg
शूर्पाभ्याश्च भवेद्द्रोणी वाहो गोणी च सा स्मृता	2 Surpa =1 Droni (Goni, Vaho)	49.152kg
गोणीचतुष्टयं खारी...। चतुःसहस्त्रपलिका षण्णवत्यधिका...	4 Goni = 1Khari(1 Khari = 4096 Pala)	196.608kg
पलानां द्विसहस्त्रश्च भार एकः प्रकीर्तितः	2000 Pala= 1 Bhara	96.000 kg
तुला पलशतं ज्ञेया सर्वत्रैवैष निश्चयः।	100 Pala=1 Tula	4.800 kg

According to *Rasatarangini*: [14] (R.T. 2/60-69)

षड्भिस्तु सर्षपैर्गौरैर्यवस्त्वेकः	6 Gaura Sarshapa= 1 Yava
त्रिभिर्यवैश्च गुञ्जैका	3 Yava= 1 Gunja (Ratti)
वसुसंख्योन्मिताभिश्च रक्तिकाभिस्तु माषकः	8 Ratti= 1 Masha
माषैः रविसंख्यातैस्तोलकं परिकीर्तितम्	12 Masha=1 Tola(Vataka, Kshudrak, Drankshana)
तोलकद्वितयेनेह कर्षः	2 Tola= 1 Karsha(Tinduka, Aksha, Bidalapadaka, Kavalagraha, Suvarna)
कर्षद्वयं त्वर्द्धपलं...	2 Karsha= ArdhaPala(Sukti, Astamika, Palaardha)
शुक्तिभ्यान्तु पलं ज्ञेयं	2 Sukti= 1 Pala(Musti, Shodashika, Chaturthika, Bilva, Prakuncha)
पलाभ्यां प्रसृतं ज्ञेयं	2 Pala= 1 Prasrut(Prasruti)
प्रसृतिभ्यां समाख्यातः कुडव...	2 Prasruti= 1 Kudava(Anjali)
कुडवाभ्यां शरावः स्यात्...	2 Kudava= 1 Sharava (Manika, AstaPala)
दशभिश्च पलैरत्र सेरस्त्वाधुनिकः स्मृतः	10 Pala= 1 Sera (80 Tola)

According to *Rasa Jala Nidhi* [15]: 1st Vol. (7th chapter)

तृटिः स्यादणुभिःषड्	6 Anu = 1 Truti
तैर्लिक्षा षड् भिरीरिता।	6 Truti= 1 Liksha
ताभिः षड्भिर्भवेद् यूकः	6 Liksha= 1 Yuka
षड्यूकास्तद् रजः स्मृतम्।	6 Yuka= 1 Raja
षड् रजः सर्षपः प्रोक्त	6 Raja= 1 Sarshapa
तैः षड् भिर्यव ईरितः।	6 Sarshapa= 1 Yava
एका गुञ्जा यवैः षड्भि	6 Yava= 1 Gunja
निष्पावस्तु द्विगुञ्जकः ॥	2 Gunja = 1 Nishpava
स्याद् गुञ्जात्रितयं वल्लो	3 Gunja = 1 Valla
द्वौ वल्लौ माष उच्यते।	2 Valla= 1 Masha
द्वौ माषौ धरणं	2 Masha= 1 Dharana
ते द्वे शाणनिष्ककलाः स्मृताः ॥	2 Dharana= 1 Shana (Nishka, Kala, Shana, Tanka)
निष्कद्वयं तु वटकः	2 Nishka= 1 Vataka (Kola, Gadhyana)
स्यात् कोलद्वितयं तोलः	2Kola= 1 Tola(Karsha)
कर्षो निष्कचतुष्ट्यम् ॥७॥	4 Nishka=1 Karsha(Udumbara, Panitala, Suvarna, Kavalagraha, Aksha, Bidalapaka)
शुक्तिः पाणितलद्वयम् ॥८॥	2 Panitala= 1 Sukti
शुक्तिद्वयं पलं।	2 Sukti= 1 Pala (Musti, Prakuncha, Bilva)
पलद्वयं तु प्रसृतं	2 Pala = 1 Prasrut
तद्द्वयं कुडवोऽञ्जलिः।	2 Prasrut= 1 Kudava(Anjali)
कुडवौ माणिका तौ स्यात्	2 Kudava= 1 Manika

प्रस्थो द्वे माणिका स्मृतः ॥१०॥	2 *Manika*= 1 *Prastha (Sarava, Astapala)*
प्रस्थद्वयं शुभं	2 *Prastha*= 1 *Shubha*
ते द्वे पात्रकं	2 *Shubha*= 1*Patrak (Adhaka)*
तैश्चतुर्भिघटोन्मानलल्वण...	4 *Adhaka*= 1*Drona* (*Ghata, Unmana, Nalvana, Armana, Kumbha*)
पलानां शतकं तुला	100*Pala*= 1*Tula*(400*Tola*)
पलानां द्विसहस्रञ्च भारः एकः प्रकीर्तितः	2000 *Pala* = 1*Bhara*
द्रोणाभ्यां सुर्पो विज्ञे यश्चतुःषष्टिशरावकः	2 *Drona* = 1 *Surpa* (64 *Sharava*)
सुर्पाभ्याञ्च भवेद् द्रोणी	2 *Surpa* = 1 *Droni* (*Vahi, Goni*)
द्रोणीचतुष्टयं खारी	4 *Droni* = 1 *Khari*

DISCUSSION

Mana Paribhasha can be considered as one of the Basic principles of any science as it is significantly essential to understand the deeper aspects of the subject. In *Ayurveda* also we can find many references of *Mana Paribhasha* since *Bruhattrayee* to many of the *Rasashastra Evum Bhaishajya Kalpana* classical texts. Application of *Mana Paribhasha* can be found in all the current subjects of *Ayurveda* like *Rachana Sharira, Kriya Sharira, Dravya Guna, Rasa Shastra Evum Bhaisajya Kalpana, Roga Nidana, Agad Tantra, Swasthavritta, Kaumarbhrutya, Prasuti Tantra Evum Stree Roga, Kayachikitsa, Panchakarma, Shalya Tantra, Shalakya Tantra.* Many of the classical texts like *Charak Samhita, Sharangadhara Samhita, Vaidyaka Paribhasha Pradeepa* have emphasized the importance of *Mana.* If we keenly observe the *Mana Paribhasha* mentioned in various classics, we can find many of the differences in their explanation. These may be due to the different time period when those textbooks were written.

Conclusion

Mana Paribhasha (Units of measurements) is an integral part of any science when it comes to understand the subject matter in a comprehensive manner. In *Ayurveda* also the necessity of *Mana* is so evident in understanding all the current subjects. Most of the classical texts have highlighted the importance of *Mana* and relevance of its knowledge*. Mana Paribhasha* mentioned in any particular texts may be based on the transactions prevailed in the society during that time period, hence it is better to follow the same *Mana* to formulate any medicines which are mentioned in that particular classical text. Due to different time periods of classical texts from *Caraka Samhita* till recent period classical texts, the *Mana* which were mentioned are having certain differences with some similarities too. Hence to understand any classical texts of *Ayurveda* one has to be thorough with *Mana Paribhasha* which is mentioned in that particular text.

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