

## PHARMACOGNOSTICAL AND PHARMACEUTICAL ANALYSIS OF ERANDMOOLADI NIRUHA BASTI

Ram Poojan Verma<sup>1</sup>, Prof. Dr. Anup Thakar<sup>2</sup>, Harisha C. R.<sup>3</sup>, V. J. Shukla<sup>4</sup>, Ritika Mishra<sup>5</sup> and Shruti Vinchi<sup>6</sup>

<sup>1</sup>PG Scholar, Department of Panchakarma.

<sup>2</sup>HOD Panchakarma Dept.

<sup>3</sup>Head, Pharmacognosy,

<sup>4</sup>Head, Pharmaceutical Chemistry Lab, I.P.G.T. & R.A, G A U Jamnagar,

<sup>5</sup>PG Scholar, Department of Panchakarma,

<sup>6</sup>PG Scholar, Department of Roganidana Evem Vikriti Vigyan.

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\*Corresponding Author

Dr. Ram Poojan Verma

PG Scholar, Department of  
Panchakarma, I.P.G.T. and  
R.A, G A U Jamnagar.

### ABSTRACT

Lumbar spondylosis is now a days growing shrub of discomfort with a very painful and disabling condition in advancing years of life *Panchakarma* holds a unique place in *Ayurvedic* treatment portfolio due to this multi effect approach presented by each therapy. The fact that *Dosha* (waste material) once removed by *Panchakarma* procedures can never recur, adds to the promising nature of these therapies. Amongst five measures *Basti* holds prominent place as it is the best treatment for *Vata Dosha*. *Niruha Basti* which was selected for present study is a mild type of *Niruha* which has *Balya*, *Rasayana* and

*Vata Kapha Shamaka* effects. These rejuvenative therapies prescribed (*Rasayana*) to control degeneration are time tested and valid till date. *Eranda* one of the best *Vatahara* drug.

**Methods-** Final product was subjected to Phrmacognostical and physico-chemical analysis such as microscopic study, loss on drying, ash value etc. **Results-** Phrmacognostical study showed the presence of contents such as; **Bottle neck shaped stone cells of *Pippali*, Starch grains of *Guduchi*, Stellete Trichome of *Kantakari*** etc. Preliminary physico-chemical analysis showed that the loss on drying value was found to be 10.89%, pH 7.0, Ash value 6.23%, Alcohol soluble Extract 4.24%, Water soluble Extract 20.13%. **Conclusion-** The pharmacognostical and physico chemical analysis of *Erandamooladi Niruha Basti*

confirmed the purity and genuineness of the drug. Further studies may be carried out on it on the basis of observation made and results of experimental studies.

**KEYWORDS:** Erandamooladi Niruha Basti, Katishoola, Lumbar spondylosis, Pharmacognosy.

## INTRODUCTION

'Ayurveda', the natural healing system of medicine harms upon both curative and preventive aspects of health. Changing life style has brought upon many diseases with different dimensions in human life of developing countries. Factors like improper sitting postures, long driving, usage of internet, TV etc. for a prolonged period, jerking movements in travel, improper sports activities and bad sleeping posture etc. are the chief contributing factors to produce *Katishoola* (Musculoskeletal disorder). The most important musculoskeletal structure is Spine. Lumbar spine, being the major bearer of whole body weight of an individual, that's why it is most prone to be affected.

Back pain is the most common ailment in today's busy life. Majority of us have experienced one or more episodes of back pain in our lives and many of us live with chronic symptoms. Incidences of low back pain affects 60-85% in adults and lumbar Spondylosis is responsible for about 10% of all back pain. So this disease has a significant impact upon working population. This disease not only inflicts pain but causes difficulty in walking, daily routine activities and cut off the happy life of the patient.

In the present study, the *Erandamuladi Niruha Basti*<sup>[1]</sup> is subjected to Pharmacognostical and pharmaceutical analysis. Preliminary organoleptic features and results of microscopy were verified and all the ingredients were proved to be authentic.

## MATERIALS AND METHODS

### Collection, Identification and Authentication of raw drugs

The raw materials were collected from the pharmacy of Gujarat Ayurved University, Jamnagar. All the raw drugs were identified and authenticated in the Pharmacognosy Department, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar.

### Preparation of the drug

As specific method of preparation is not mentioned for this drug, *Kalka* and *Kwatha dravya* of *Erandamuladi Niruha Basti* were prepared in Pharmacy of Gujarat Ayurved University, Jamnagar as per common guidelines described in classics and API for *Churna* and *Yavakuta* formulation. Physico-chemical and qualitative analysis of the final product were carried out in the pharmaceutical chemistry laboratory of IPGT & RA, Gujarat Ayurved University, Jamnagar under expert guidance.

### Pharmacognostical study

The Pharmacognostical study comprises of organoleptic study and microscopic study of finished product scientifically studied at Pharmacognosy laboratory, I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar, Gujarat, India.

### Organoleptic Study

The Organoleptic characters of *Ayurvedic* drugs are very important and give the general idea regarding the genuinity of the sample. Organoleptic parameters like Taste, Colour, odour and touch were scientifically studied.<sup>[2]</sup>

### Physico-chemical analysis

*Erandamooladi Niruha Basti* was analyzed using various standard physico-chemical parameters such as loss on drying, water soluble extract, alcohol soluble extract etc.<sup>[3]</sup>

## RESULTS AND DISCUSSION

### Organoleptic characters of *Erandamooladi Niruha Basti*

Organoleptic characters contents of *Erandamooladi Niruha Basti* like colour, taste, touch, Odour were recorded and shown in **Table- 2**.

### Microscopic Study

Diagnostic characters of *Erandamooladi Niruha Basti* under the microscope showed; **Bottle neck shaped stone cells of *Pippali*, Starch grains of *Guduchi*, Stellete Trichome of *Kantakari*** etc. All these are showed in **Plate no 1**.

## PHARMACEUTICAL EVALUATION

### Physico-chemical analysis

Physico-chemical analysis of *Erandamooladi Niruha Basti* revealed the value of loss on drying was 14.11%, Ash value 7.807% w/w, water soluble extraction 17.38% Alcohol soluble extraction 5.75%, pH Value 6.5 are shown in **Table –3**.

**Table1. Contents of *Erandamooladi Niruha Basti*.**

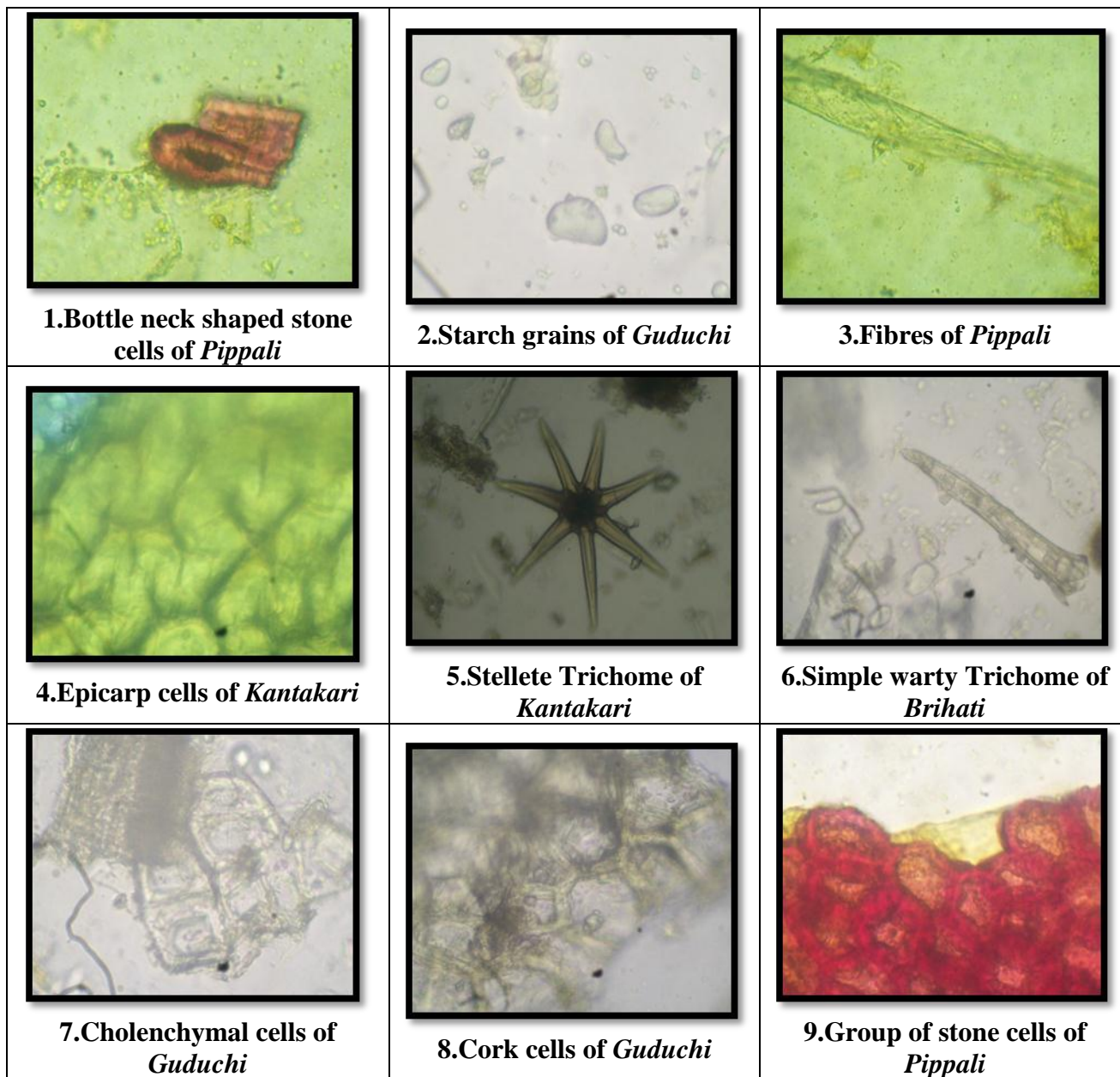
Serial no.	Drug	Botanical source	Part used	Dosage
1	<i>Erand</i>	<i>Ricinus communis</i> Linn.	Root	50 gm
2	<i>Palasha</i>	<i>Butea monosperma</i> Linn.	Seed	25 gm
3	<i>Shalparni</i>	<i>Desmodium gangeticum</i> D.C.	Root	25 gm
4	<i>Prishniparni</i>	<i>Uraria picta</i> Disce	Root	25 gm
5	<i>Vrihati</i>	<i>Solanum indicum</i> Linn	Root	25 gm
6	<i>Kantakari</i>	<i>Solanum surratens</i> Burn.	Root	25 gm
7	<i>Gokshura</i>	<i>Tribulus terrestris</i> Linn.	Root	25 gm
8	Rasna	<i>Pluchea lanceolata</i> C.B Clarke	Root	25 gm
9	<i>Aswagandha</i>	<i>Withnia somnifera</i> D.C.	Root	25 gm
10	<i>Atibala</i>	<i>Abutilon indicum</i> Linn.	Root	25 gm
11	<i>Guduchi</i>	<i>Tinospora cordifolia</i> Willd.	Stem	25 gm
12	<i>Punanarnava</i>	<i>Boerhavia diffusa</i> Linn.	<i>Panchang</i>	25 gm
13	<i>Aragwadh</i>	<i>Cassia fistula</i> Linn.	<i>Phalmajja</i>	25 gm
14	<i>Devdaru</i>	<i>Cedrus deodara</i> Roxb.	kandsara	25 gm
15	<i>Madanphal</i>	<i>Randia spinosa</i> Pair	fruit	25 gm
16	Shatpushpa	<i>Foeniculum officinalis</i>	Fruit	25 gm
17	<i>Hribera</i>	<i>Juniperus communis</i> Linn	Flower	3 gm
18	<i>Priyangu</i>	<i>Callicrpa macrophylla</i> Vahl	Flower	3 gm
19	<i>Pippali</i>	<i>Piper longum</i> Linn	Fruit	3 gm
20	<i>Yasthimadhu</i>	<i>Glycyrrhiza glabra</i> Linn.	Root	3 gm
21	<i>Bala</i>	<i>Sida cordifolia</i> Linn.	Seed	3 gm
22	<i>Rasanjan</i>	<i>Berberis aristata</i> D.c	Niryas	3 gm
23	<i>Indrayava</i>	<i>Holarrhena antidysenterica</i> Linn	Seed	3 gm
24	<i>Mustak</i>	<i>Cyperus rotundus</i> Linn	Root	3 gm
25	<i>Saindhablavan</i>	Rock salt		10 gm
26	<i>Madhu</i>	Honey		70ml.
27	<i>Tila taila</i>	<i>Sesamum indicum</i>		70ml
28	Gomutra	Cows urine		10ml


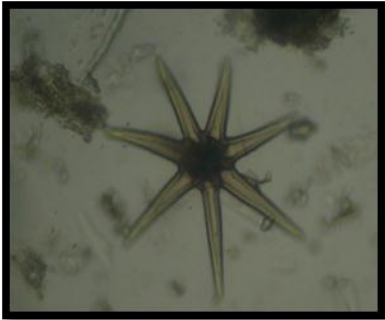

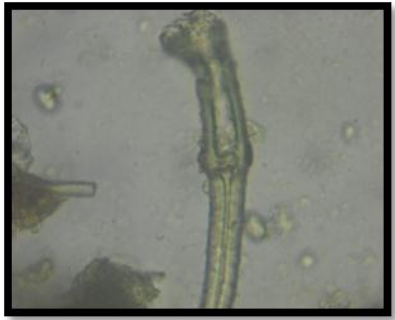
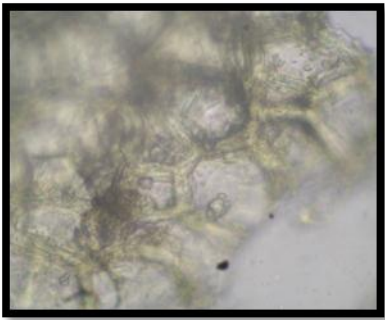
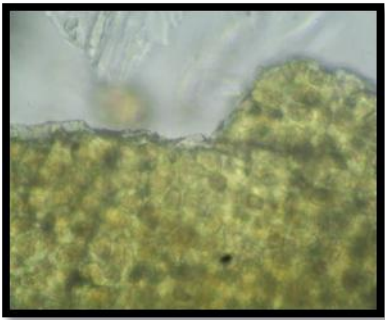
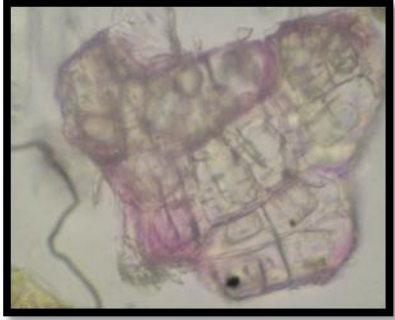


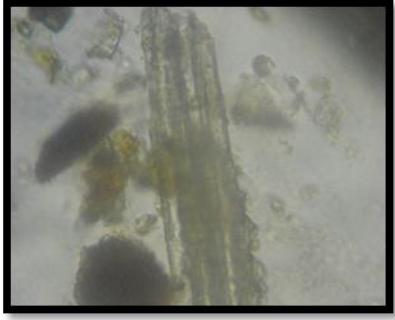


**Table 2: Organoleptic parameters of *Erandamooladi Niruha Basti*.**


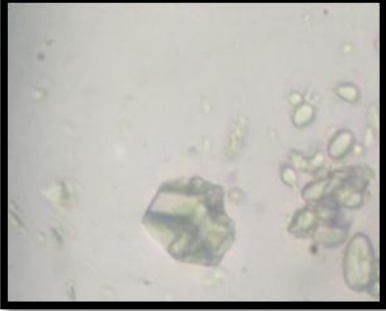
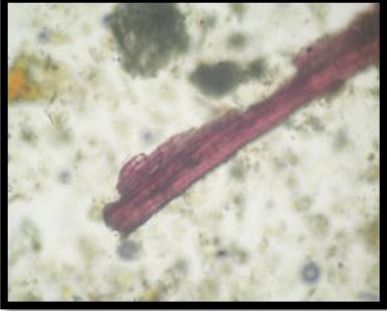
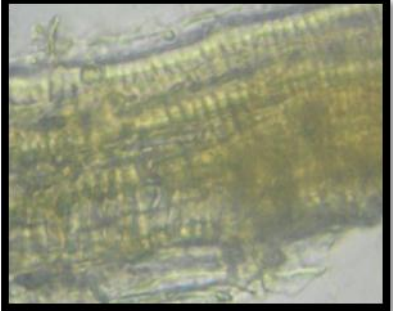
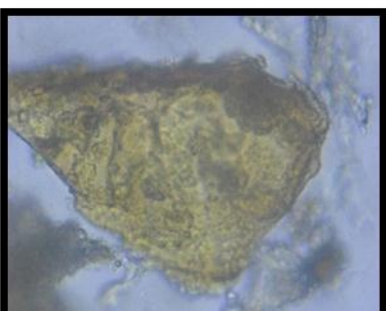

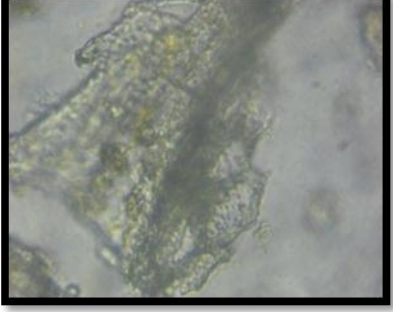
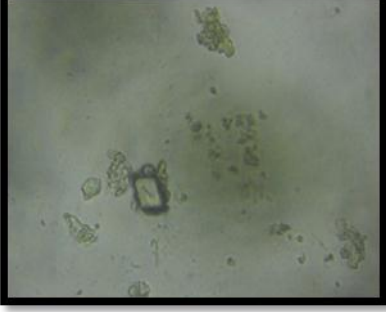

Serial no.	Character	Observed
1	Colour	Greenish yellow
2	Odour	Pungent
3	Taste	Bitter
4	Touch	Course Powder

Table 3: Physico-chemical analysis of *Erandamooladi Niruha Basti*.

Serial no.	Test	Result
1	Loss on drying	10.89% w/w
2	Ash value	6.23% w/w
3	Water soluble extract	20.13% w/w
4	Alcohol soluble extract	4.24% w/w
5	pH	7.0

Plate no 1: Microphotographs of *Erandamooladi Niruha Basti*.

		
10. Black Debris of <i>Pippali</i>	11. Stелete Trichome of <i>Kantakari</i>	12. Simple warty Trichome of <i>Brihati</i>
		
13. Warty trichome of <i>Gokshura</i>	14. Cork cells of <i>Guduchi</i>	15. Mesocarp cells of <i>Brihati</i>
		
16. Lignified Cholechymal cells of <i>Guduchi</i>	17. Acicular crystal of <i>Rasana</i>	18. Parenchymal cells of <i>Kantakari</i>
		
19. Group of fibre of <i>Bala</i>	20. Oil globule of <i>Eranda</i>	21. Group of stone cells of <i>Madana</i>

 <p>22.Epicarp cells of <i>Madana</i></p>	 <p>23.Rhomboidal crystal of <i>Yashtimadhu</i></p>	 <p>24.Lignified fibres of <i>yashtimadhu</i></p>
 <p>25.Annular and scleriform vessels of <i>Musta</i></p>	 <p>26.Epicarp cell of <i>Priyangu</i></p>	 <p>27.Oil globule of <i>Hapusha</i></p>
 <p>28.Pitted parenchymal gland with pitted vessels of <i>Daruharidra</i></p>	 <p>29.Prismatic crystal of <i>Indrayava</i></p>	 <p>30.Raphides of <i>Punarnava</i></p>

## CONCLUSION

Quality control of Herbo- mineral formulation is very much necessary to assess its safety, purity and universal acceptability. Standardization is a measurement for ensuring the quality control enabling the reproducibility of the formulation. The pharmacognostical and physico chemical analysis of *Erandamooladi Niruha Basti* confirmed the purity and genuinity of the drug. Further studies may be carried out on it on the basis of observation made and results of experimental studies. This study may be beneficial for future researchers and can be used as a reference standard in the further quality control researchers.

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**REFERENCES**

1. Charaka Samhita with 'Ayurveda-Deepika' Commentary of Chakrapanidatta, Chowkhamba Sanskrit Sansthana; Varanasi, seventh edition 2000 Ed. Reprint, Chaukhamba Surbharati Prakashan, Varanasi 2007, Siddhi sthana 3/38-42.
2. Trease and Evans, Pharmacognosy, 15th Ed., W.B. Saunders Company Ltd., 1996; 569: 570.
3. Ayurvedic Pharmacopoeia of India PDF-1, Govt. of India, Ministry of health and family welfare, Delhi, 2007; 5, appendix-2.2.9: 214.