

### Detailed Pharmacognostical and Preliminary Pharmaceutical Assay of *Shamana Yoga*

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#### Abstract

Women's health issues include menstrual, maternal health, child birth, menopause, uterine fibroid, breast cancer etc. Among these, uterine fibroid have got an important place. The myomectomy and hysterectomy is only treatment provided by the modern stream but it has created newer health issues. So, in present study *Virechana Karma, Uttar Basti and Shamana Yoga* were selected as a treatment of *Garbhasaya Arbuda* (Uterine fibroid). *Shamana Yoga* includes *Triphala* and *Tankana*. The present evaluation done for the standardisation of *Shamana Yoga* through the pharmacognostical and pharmaceutical standards. *Shamana Yoga* (i.e. *Triphala: Tankana, 5:1*) were Creamish yellow in colour with light appearance, Astringent odour, *Madhura Tikta Rasa* and Fine in touch. For *Shamana Yoga* pH value was 4.5, water soluble extract 69% w/w, Methanol soluble extract 16.68 % w/w, ash value 6.51 % w/w and loss on drying was 5.25 % w/w, and acid insoluble ash value was 2.43% w/w. HPTLC were carried out in which under 254 nm showed four spots at 0.01, 0.30, 0.57, and 0.83 and under 366 nm showed one spot at 0.01 Rf values.

#### Keywords

*Pharmacognosy, Physicochemical analysis, Uterine fibroid, Shamana Yoga*



**Greentree Group**

Received 08/07/16 Accepted 23/07/16 Published 10/09/16

## INTRODUCTION

Women's health issues include menstrual, contraception, maternal health, child birth, menopause, uterine fibroid, breast cancer etc. Fibroids are an important public health concern, both because of the large number of women affected by them and the large number of hysterectomies undertaken to treat the symptoms they cause. Uterine fibroid is not only the commonest benign tumour of uterus but also the commonest solid tumour in female. According to the National Institutes of Health (NIH), about 70 to 80 % of women have them by the age of 50<sup>1</sup>, one in every five women of childbearing age suffers from uterine fibroids<sup>2,3</sup>. The myomectomy and hysterectomy is only answer provided by the modern stream but it has created newer health issues. In modern medicine there is no other treatment modality to cure the Uterine fibroid. So, in present study *Virechana Karma*<sup>4</sup>, *Uttar Basti*<sup>5</sup> and *Shamana Yoga* were selected for the management of *Garbhasaya Arbuda* (Uterine fibroid). *ShamanaYoga* includes *Triphala* and *Tankana* with a ratio of 5:1. All these drugs have *KashayaRasa*, *Laghu*, *Ruksha Guna*, *Uhsna Virya* and *Kapha-Pitta Shamaka* property<sup>6</sup>. The present evaluation

done for the standardisation of *Shamana Yoga* through the pharmacognostical and pharmaceutical standards. Organoleptic features of *Shamana Yoga* were within the standard range. HPTLC were carried out after organizing appropriate solvent system.

## MATERIALS AND METHODS

### Collection and authentication of raw drugs:

The raw drug material *Haritaki*, *Bibhitaki*, *Amalaki*, and *Suddha Tankana* were obtained from Pharmacy of Gujarat Ayurved University GAU Jamnagar

### Method of Preparation of *Shamana Yoga*:

Dried fruit of *Haritaki*, *Bibhitaki*, *Amalaki* was taken in a grinder for pulverisation to reach a consistency of Fine powder form and then it was passed through a sieve-number 80. *Sodhita Tankana* Powder was added in *Triphala Powder*.

### Pharmacognostical Evaluation:

Morphological, organoleptic and microscopic evaluation on *Shamana Yoga* was conducted at Pharmacognostical laboratory of institute. *Churna* were dissolved in small quantity of distilled water and studied with and without staining. Micro photographs of the slides were taken with

Carl Zeiss microscope attached with camera<sup>8,9</sup>.

### Physico-chemical Evaluation:

*Shamana Yoga* were analysed by standard qualitative and quantitative parameters according to The Ayurvedic Pharmacopoeia of India<sup>11</sup> for pH value, water soluble extract, Methanol soluble extract, ash value and loss on drying, and acid insoluble ash value. HPTLC were also performed.

### Method of Preparation of Methanolic extract for *Shamana Yoga*:

A solution was prepared by mixing 2.5 gm of powder of *Shamana Yoga* and 50 ml of 70% methanol and the solution was kept in a clean and dry place for 24 hr with intermittent shaking. Then extract was collected and filtered through Whatman no. 1 filter paper. From the above solution, 20 ml was taken and heated on thermostatic water bath till a dark brownish residue was obtained which yielded 16.68% w/w.

### HPTLC of *Shamana Yoga*:

Methanolic extract of *Shamana Yoga* was spotted on pre-coated silica gel GF 60254 aluminium plate by V sample applicator fitted with a 100 µl Hamilton syringe. Toluene (7ml) and ethyl acetate (2 ml) and Formic acid (0.5 ml) were used as the mobile phase. The resulting HPTLC pattern

was viewed under short-wave ultraviolet light at 254 nm and long wave ultraviolet at 366 nm. (Plate. 3.)

## OBSERVATION AND RESULTS

### Pharmacognostical Study

#### Organoleptic characters of *Shamana Yoga*:

The *Shamana Yoga* was Fine in touch, Creamish yellow in colour, and had astringent odour. The results obtained are tabulated in Table 1.

Table 1: **Organoleptic characters of *Shamana Yoga***

Properties	<i>Shamana Yoga</i>
Colour	Creamish yellow
Odour	Astringent
Appearance	Light
Test	<i>Madhura&amp;Tikta</i>
Touch	Fine

#### Microscopical analysis of *Shamana Yoga*:

The characteristics observed under microscope were Compound starch, Pitted vessels, Scleroids of *Haritaki*<sup>12</sup>. Pitted stone, Trichome and Scleroids of *Bibhitaki*<sup>13</sup>. Stone cell, Mesocarp, Crystal with tannin and Fibers of *Amalaki*<sup>14</sup>. (Plate 2)

### Pharmaceutical study:

#### Physico-chemical parameter of *Shamana Yoga*:

The results of Physico-chemical parameter of *Shamana Yoga* obtained are tabulated in table 2. pH value was 4.5, water soluble extract 69% w/w, Methanol soluble extract 16.68 % w/w, ash value 6.51

% w/w and loss on drying was 5.25 % w/w, and acid soluble ash value was 2.43% w/w.

**Table 2** Physico-chemical parameter of *Shamana Yoga*

No.	Name of the Test	Value
1.	Loss on drying (at 110°C )	5.25 % w/w
2.	Ash Value	6.51 % w/w
3.	Water soluble extraction	69 % w/w
4.	Methanol soluble extraction	16.68 % w/w
5.	pH value by pH paper	4.5
6.	Acid insoluble Ash value	2.43% w/w

**High Performance Thin Layer Chromatography of *Shamana Yoga*:**

HPTLC under 254 nm showed four spots at 0.01, 0.30, 0.57, and 0.83 and under 366 nm showed one spot at 0.01 Rf values. Table 3

**Table 3** High Performances Thin Layer Chromatography of *Shamana Yoga*

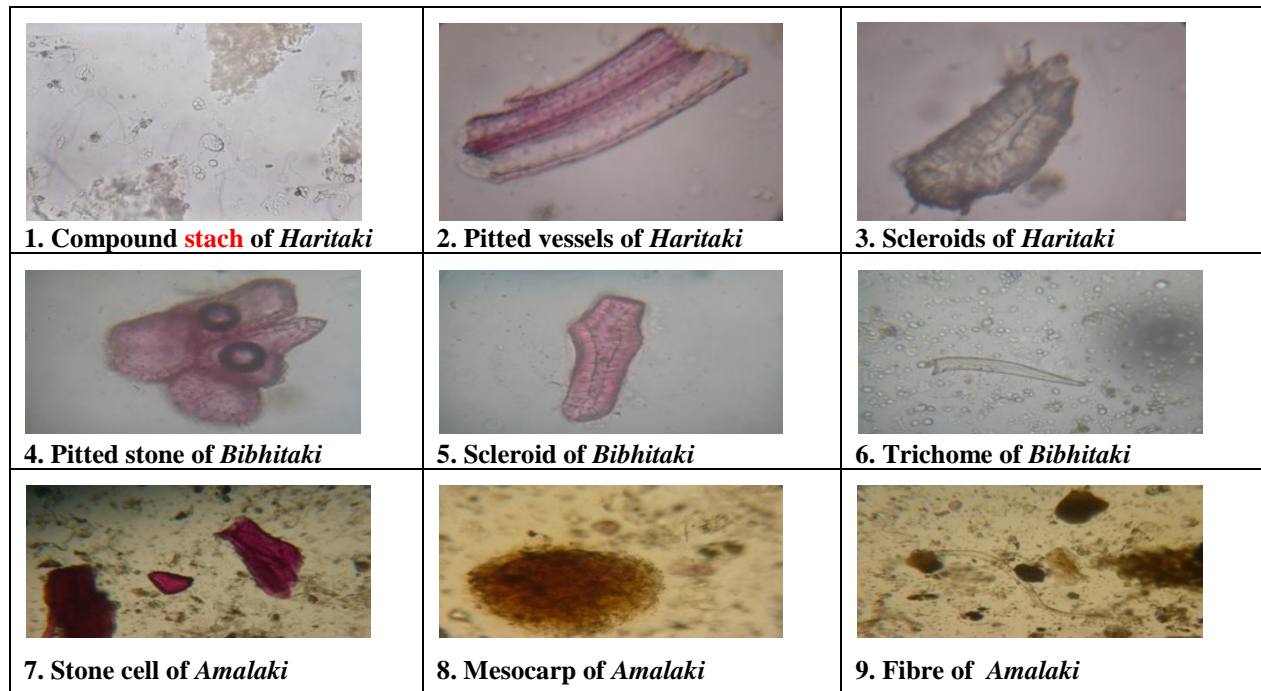
UV-254nm		UV-366nm	
No. of Spot	Rf Value	No. of Spot	Rf Value
1	0.01	1	0.01
2	0.30		
3	0.57		
4	0.83		

**Plate 1** Raw drug

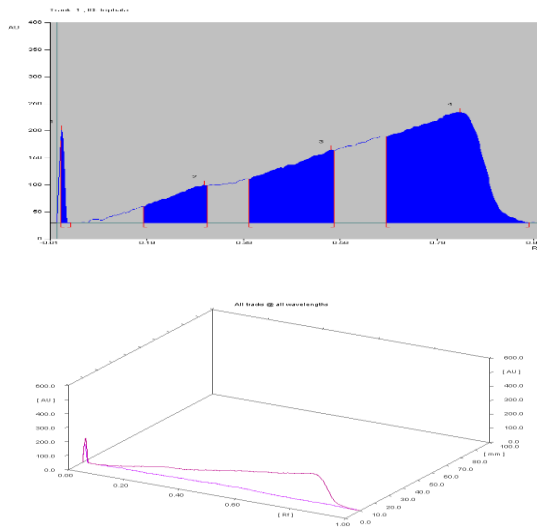


1. *Triphala* raw drug 2. *Sodhita Tankana*

**Plate 2** Microscopic Photographs of *Shamana Yoga*



**Plate 3** HPTLC of *Shamana Yoga* at 254 and 366nm and 3D Graph



## DISCUSSION

Fibroid is a burning issue among the Gynaecological problems in present era. Modern science has no appropriate answer to this disease. In this study *Virechana Karma Shamana Yoga* is used in the management of Uterine Fibroid. *Triphala* has *Kapha Pitta Shamaka Vatanuloman* property by which it normalized the function of *Dosha*<sup>15</sup>. It possess *Lekhana, Shothahara, Vednasthapana* action by this it removes *Shotha* from the wall of the uterus. *Tankana* has also *Lekhana* property which Scrapping the fibroid and removed from the *Artavavaha srotas* and does *Artavajanana Karma* properly. The present standardisation of *Shamana*

*Yoga* through Pharmacognostical, pharmaceutical and phytochemical analysis is done for setting a preliminary profile for further references.

As this single drug preparation is *Anubhuta* and frequently used in the OPD of SRPT Dept, so the pharmaceutical and pharmacognostical analysis is required for the authenticity of drug. Pharmacognostical study of *Shamana Yoga* showed Characteristic feature under microscope were Compound starch, Pitted vessels, Scleroids of *Haritaki*. Pitted stone, Trichome and Scleroids of *Bibhitaki*. Stone cell, Mesocarp, Crystal with tannin and Fibers of *Amalaki*. (Plate 2)

## CONCLUSION

Pharmacognostical and phyto-chemical assessment of *Shamana Yoga* indicated the specific characters of ingredients which were used in the preparation, there is no major change in the microscopic structure of the drug during the processes of preparation of *Shamana Yoga*. All the Pharmaceutical parameters analysed within the acceptable range and it may be used as standard reference for further research work and clinical studies.

## Acknowledgement:

Pharmacy - Gujrat Ayurveda University  
Pharmaceutical Laboratory IPGT &RA  
Pharmacognocoy Laboratory IPGT &RA  
Prof. Laxmipriya Dei,Guide IPGT &RA  
Prof. P. K. Prajapati Director IPGT & RA

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