

## EVALUATION STUDIES OF PHARMACOGNOSTICAL AND PHARMACEUTICAL OF *VARUNADI KWATH*

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### ABSTRACT

**Background:** Uterine fibroids are benign tumors that originate in the womb. It is also called an Uterina myoma. The growths are typically benign, or noncancerous. Most of them 50% asymptomatic and 3% symptomatic. In Ayurveda the herbal drugs easily available and no any side effect and an efforts by this paper that *Varunadi Kwath* is useful.

**Aim:** To standardies *Varunadi Kwath* pharmacognostically, physiochemically and phytochemically. **Materials and Methods:** *Varunadi Kwath* were collected and prepared *Yavkut* in the Pharmacy, GAU, Jamnagar, were identified and authenticated at Pharmacognosy laboratory, IPGT and RA, Jamnagar. **Results:** The presence of Fibers

of *Varuna*, Epidermal cells of *Yavkshara*, Epicarp cells of *Gokshura*, Scalariform vessels of *Shunthi*, etc. in Pharmacognostical study and in Pharmaceutical study of *Varunadi Kwath*, Loss on drying 20 % w/w, pH 6.5. Analytical study showed 10 spots at 254 nm and 5 spots at 366 nm **Conclusion:** These findings could be helpful in identification authentication and standardization of the *Varunadi Kwath*.

**KEYWORDS:** *Varunadi Kwath Yavkuta*, HPTLC, Pharmacognosy, Pharmaceutics, Uterine fibroid.

### INTRODUCTION

The benign tumor that originate in the uterus it is called a uterine fibroid. The growths are typically benign, or noncancerous. The cause of fibroids is unknown. The prevalence is highest between 35-45 years age group.<sup>[1]</sup> Uterine fibroids changes the shape of the uterus, fallopian tubes can be blocked, impact the endometrial lining, the blood flow to the uterine cavity can be effected, and all these things will decrease the ability of implantation of embryo

into the uterine wall.<sup>[2]</sup> Charak has mentioned *Arbuda* in *Chikitsa Sthana* and described *Arbuda* as *shophavishesha* (one of the forms of *Shotha*).<sup>[3]</sup> This clearly indicates that basically aetiopathogenesis, clinical features and treatment of tumours of reproductive system are identical to the tumours of any other body part; however, few clinical features present due to specific location of disease has to be investigated. *Granthi* when present in *yoni* (female reproductive system) *Garbhashaya* (uterus) will lead to disturbed menstrual cycle menorrhagia, metrorrhagia, dysmenorrhea, etc., along with infertility. Uterine fibroids do not have definite medical treatment in the modern gynaecological practices other than surgery. In Ayurveda the herbal drugs easily available and no any side effect and an efforts by this paper that *Varunadi Kwath*<sup>[4]</sup> is useful.

## MATERIALS AND METHOD

### Collection of Raw Drug

*Varunadi Kwath* were collected from pharmacy and identified and authenticated at pharmacognosy laboratory, IPGT and RA, Jamnagar. The ingredients and parts used in the preparation of the final products are listed in (Table 1).

### Preparation of the Drug

Powder of *Varunadi Kwath Yavkut* and powder was prepared in the pharmacy of Gujarat Ayurved University, Jamnagar.

**Table 1: Showing contents of *Varunadi Kwath*.**

(SL/Ayu/ Pharmacop-eia/228/ Vol 2)

Drug	Botanical name	Parted used	Quantity
<i>Varuna</i>	<i>Crataeva nurvala</i> Buch.-Ham	Twak	16g
<i>Gokshura</i>	<i>Tribulus terrestris</i> Linn	Whole plant	16g
<i>Shunti</i>	<i>Zingiber officinale</i> Rosc	Rhizome	16g
<i>Yavakshara</i>	<i>Hordeum vulgare</i> Linn	Whole plant	2g

## PHARMACOGNOSTICAL STUDY

The pharmacognostical study comprise of organoleptic study of finished product, *Varunadi Kwath*.

### 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 in Pharmacognosy laboratory, I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar, Gujarat, India.<sup>[5,6]</sup> (Table 2).

### Microscopic study

*Varunadi Kwath* was powdered and dissolved with water and microscopy of the sample was done without stain and after staining with phloroglucinol + HCL. Microphotograph of *Varunadi Kwath* was taken under Carl-zeiss trinocular microscope.<sup>[7,8,9,10]</sup>

## PHARMACEUTICAL EVALUATION

### Physico-chemical parameters of *Varunadi Kwath*

This *Churna* was analyzed using various standard physicochemical parameters such as, Loss on drying, pH, water soluble extract, methanol soluble extract and ash value as per API at the pharmaceutical chemistry lab, IPGT& RA.<sup>[11]</sup> (Table 3)

### High Performance Thin Layer Chromatography (HPTLC) Of *Varunadi Kwath*

HPTLC was performed as per the guideline provided by API. Methanolic extract of drug sample was used for the spotting. HPTLC was performed using Toluene+ Ethylacetate+ Acetic acid (14:4:2) solvent system and observed under visible light. The colour and Rf values of resolved spots were noted. Analytical study showed 7 spots at 254 nm and 6 spots at 366 nm.<sup>[12]</sup> (Plate 1)

## RESULTS AND DISCUSSION

### Microscopic Characters of *Varunadi Kwath*

Microscopic evaluation of *Varunadi Kwath* Powder was conducted, Characters were noted down and microphotographs were taken they are Fig-01. Fibers of *Vruna*, Fig-02. Epidermal cells of *Yavkshara*, Fig-03. Epicarp cells of *Gokshura*, Fig-04. Group of stone cell of *Gokshura*, Fig-05. Fibers of *Yavkshara*, Fig-06. Group of stone cell of *Varuna*, Fig-07. Olio-resine content of *Shunthi*, Fig-08. Scalariform vessels of *Shunthi*, Fig-09. Rosette Crystals of *Varuna*, Fig-10. Prismatic crystals of *Varuna*, Fig-11. Scleroid of *Varuna*, Fig-12. Stone cells of *Varuna*, Fig-13. Stone cells of *Gokshura*, Fig-14. Starch grains of *Shunthi*

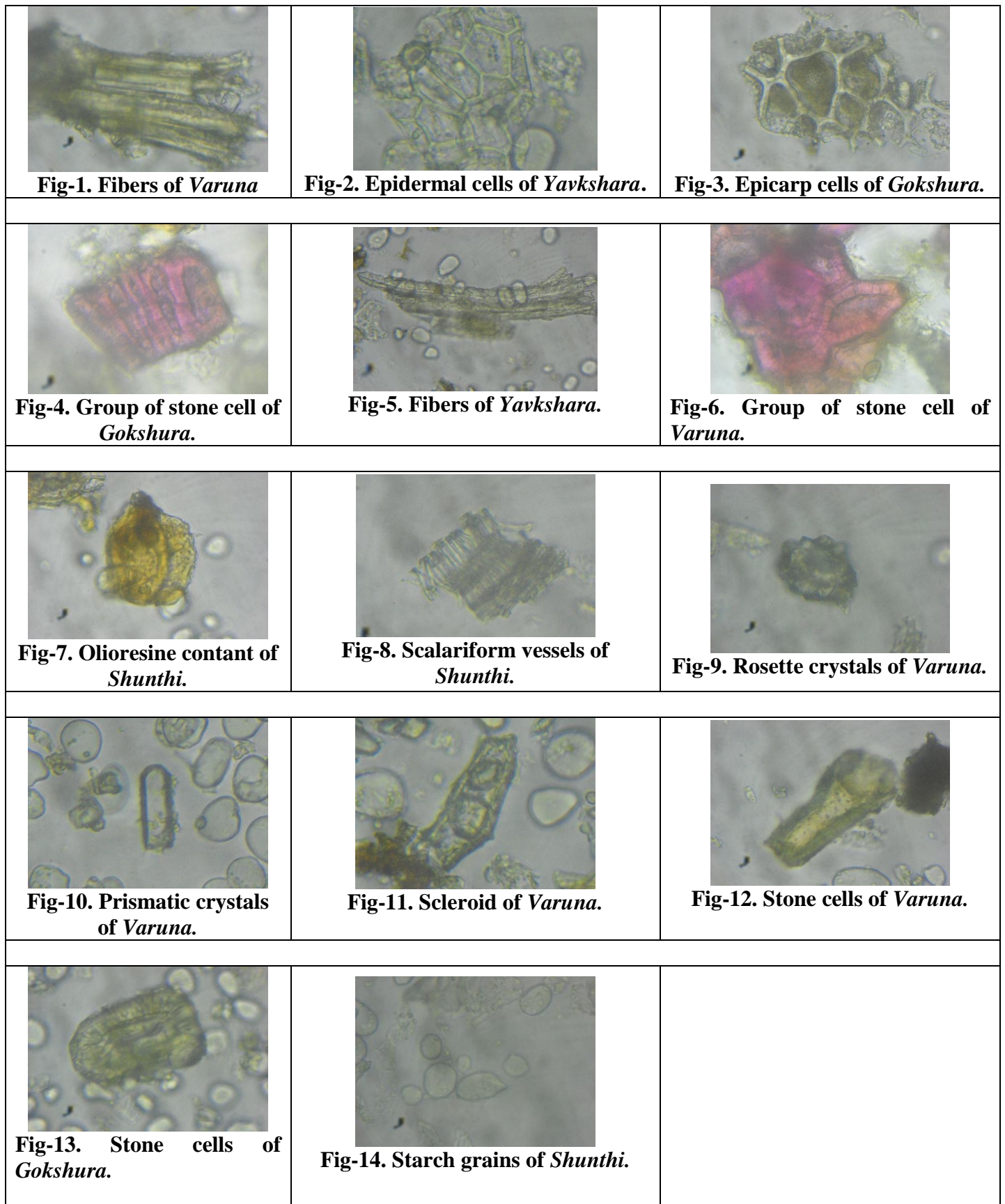
Plate 1: Pharmacognostical study of *Varunadi Kwath*.

Table 2: Organoleptic characters of *Varunadi Kwath*.

Sr. No.	Characters	Results
1	Colour	Light brownish
2	Odour	Slightly aromatic
3	Taste	Astringent
4	Touch	Coarse powder

Table 3: Physico-chemical analysis: *Varunadi Kwatha*.

Sr. No	Test	<i>Varunadi Kwatha</i>
1	Loss on drying	20 % (w/w)
2	Water soluble extract	12.50 % (w/w)
3	Alcohol soluble extract	9.50% (w/w)
4	pH	6.5
5	Ash value	9.1% (w/w)

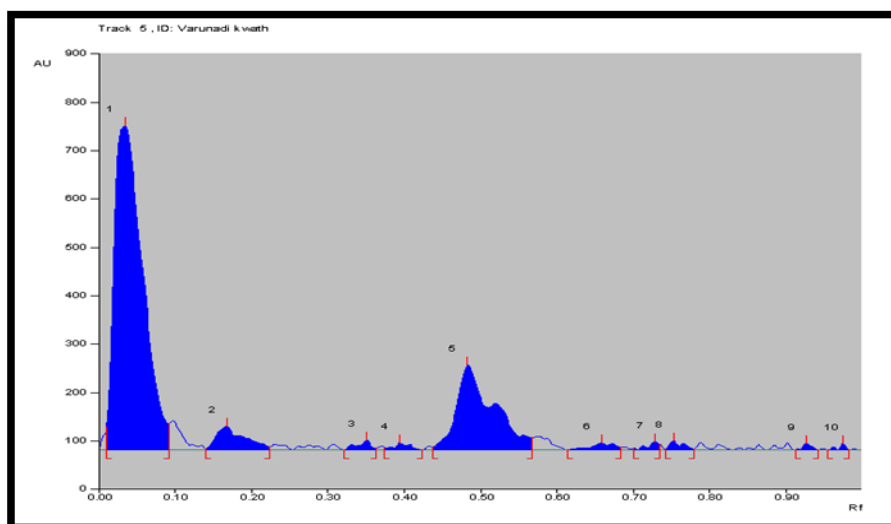


Figure 4: A at 254 nm.

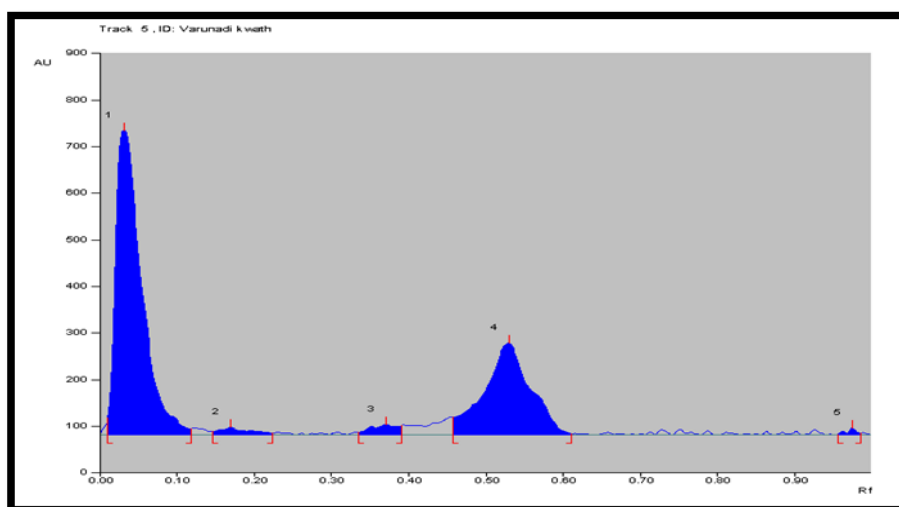


Figure 4: B at 366 nm.

Plate 1: Densitogram curve of Methanol extract of *Varunadi Kwatha*.

## CONCLUSION

The present study provides various resourceful information in relation to pharmacognostical identification of *Varunadi Kwath* and physic-chemical parameter also helpful for standardization of *Varunadi Kwath*. This findings could be helpful in identification, authentication and standardization of this formulation.

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