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Pharmacognostical and pharmaceutical studies on the *Lekhaniya Maha Kashaya*

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ABSTRACT

The benign tumor that originates in the uterus it is called a uterine fibroid. The growths are typically benign, or noncancerous. The cause of fibroids is unknown. According to the Office on Women's Health, up to 80 percent Trusted Source of women have them by the age of 50. However, most women don't have any symptoms and may never know they have fibroids. In Ayurveda the herbal drugs esily available and no any side effect and an effort by this papper that *Lekhaniya Maha Kashaya* is useful. **Aim:** To standardies *Lekhaniya Maha Kashaya* pharmacognostically, physiochemically and phytochemically. **Materials and Methods:** *Lekhaniya Maha Kashaya* were collected and prepared powder and *Yavkut* in the Pharmacy, GAU, Jamnagar, were identified and authenticated at Pharmacognosy laboratory, IPGT and RA, Jamnagar. **Results:** The presence of Annular vessels of *Haridra*, Border pitted vessels of *Chitraka*, cork cells of *Chirabilwa*, Cork cells of *Musta*, Cork cells with brown content of *Kustha* etc. in Pharmacognostical study and in Pharmaceutical study of *Lekahaniya maha kashaya* powder, Loss on drying 30 % w/w, pH 6.5. Analytical study showed 7 spots at 254 nm and 6 spots at 366 nm and in *yavkut*, Loss on drying 6.5 % w/w, pH 6.5. Analytical study showed 7 spots at 254 nm and 6 spots at 366 nm **Conclusion:** These findings could be helpful in identification authentication and standardization of the *Lekhaniya Maha Kashaya*.

Keywords: *Lekhaniya Maha Kashaya* Powder and *Yavkuta*, HPTLC, Pharmacognosy, Pharmaceutics, Uterine fibroid.

INTRODUCTION

Uterine fibroids are **benign tumors** that originate **in the** womb. It is also called an Uterina myoma. It is not known exactly why women develop uterine fibroids. Most of them (50%) remain asymptomatic.The incidence of symptomatic fibroid in hospital outpatient is about 3%. The prevalence is highest between 35-45 years age group [1]. Most women with uterine fibroid have no symptoms (75%). The symptoms are related to anatomic type and size of the tumor. The common symptoms are menstrual abnormality such as menorrhagia, metrorrhagia, dysmenorrhea, infertility, pressure symptoms, recurrent pregnancy loss (Miscarriage, Pre-term labour), dyspareunia, lower abdominal pain or pelvic pain, abdominal enlargement [2]. *Charak* has mentioned *Arbuda* in *ChikitsaSthana* and described *Arbuda* as *shophavisesh*a (one of the forms of *Shotha*) [3]. *Lekhana* is the process of scrapping or desiccation of all excess *Dosha*, *Dhatu* and *Mala*. That means the drug which rarefies the protoplasmic contents of the tissue cells and thus gradually clears the system of it disarrange constituents is known as *Lekhana*. As *Garbhashaya Arbuda* is a *Sanga Pradhan vyadhi Lekhana Karma* of *Srotas* is needed. Therefore, *Lekhaniya Maha kashaya Basti* has been planned [4].

MATERIALS AND METHOD

Collection of Raw Drug

Lekhaniya Maha Kashaya 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 *Lekhaniya Maha Kashaya Yavkut* and powder was prepared in the pharmacy of Gujarat Ayurved University, Jamnagar.

Table 1: Showing contents of *Lekhaniya Maha Kashaya*

Drug	Botanical Name	Part used	Ratio
Mustaka	*Cyperus rotundus* Linn.	Tuber	1
Citraka	*Plumbago zeylanica* L.	Root	1
Kustha	*Saussurea lappa*	Root	1
Haridra	*Curcuma longa* L.	Rhizome	1
Daruharidra	*Berberis aristate*	Stem Bark	1
Athivisa	*Aconitum heterophyllum* wall	Root	1
Chirabilva	*Holoptelia integrifolia*	Bark,Seed	1
Haimavati	*Iris versicolor*	Root	1
Vacha	*Acorus Calamus* Linn.	Rhizome	1
Katuka	*Picrorhiza kurroa*	Root and rhizome	1

PHARMACOGNOSTICAL STUDY

The pharmacognostical study comprise of organoleptic study of finished product, *Lekhaniya Maha Kashaya Powder*

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. [5, 6] (Table 2)

Microscopic study

Lekhaniya Maha Kashaya was powdered and dissolved with water and microscopy of the sample was done without stain and after staining with phloroglucinol + HCL.Microphotograph of *Lekhaniya Maha Kashaya* was teken under Corl-zeiss trin0ocular microscope [7, 8, 9, 10].

PHARMACEUTICAL EVALUATION

Physico-chemical parameters of *Lekhaniya Maha Kashaya* Powder and *Yavkuta*

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 [11]. (Table 3) (Table 4)

High Performance Thin Layer Chromatography (HPTLC) Of *Lekhaniya Maha Kashaya* Powder and *Yavkuta*

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 [12]. (Plate 1) (Plate 2)

RESULTS AND DISCUSSION

Microscopic Characters of *Lekhaniya Maha Kashaya* Powder

Microscopic evaluation of *Lekhaniya Maha Kashaya* Powder was conducted, Characters were noted down and microphotographs were taken they are **Figure** 01.Annular vessels of *Haridra*, **Figure** 02.Border pitted vessels of *Chitraka*, **Figure** 03.Annular vessels of *Haridra*, **Figure** 04.Cork cell of *Musta*, **Figure** 05. Cork cell with brown content of *Kustha*, **Figure** 06.Crystal fiber of *Daruharidra*, **Figure** 07.Cystolyth of *Chirabilwa*, **Figure** 08.Exoderm cell of *Ativisha*, **Figure** 09.Fibers of *Haimavati*, **Figure** 10.Fibers of *Musta*, **Figure** 11.Fibers passing through medullary rays of *Chirbilwa*, **Figure** 12.Group of starch grains of *Ativisha*, **Figure** 13. Group of starch grains of *Vacha*, **Figure** 14.Lignified border pitted *Chitraka*, **Figure** 15.Lignified parenchyma cell of *Chitraka*, **Figure** 16.Oil globules of *Kustha*, **Figure** 17.Oil globules of *Haimavati*, **Figure** 18.Parenchyma cell of *Haridra*, **Figure** 19.Prismatic crystal of *Daruharidra*, **Figure** 20.Prismatic crystal of *Kustha*, **Figure** 21.Scalriform vessels of *Haridra*, **Figure** 22.Silica deposition of *Musta*, **Figure** 23.Starch grains of *Chitraka*, **Figure** 24.Starch grains of *Haimavati*, **Figure** 25.Starch grains of *Katuki*, **Figure** 26.Starch grains of *Vacha*, **Figure** 27.Stone cell of *Daruharidra*, **Figure** 28.Tannin content of *Chitraka*

Plate 1: Pharmacognostical study of *Lekhaniya Maha Kashaya* powder

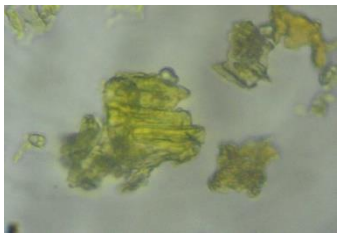

Figure 1: Annular vessels of *Haridra*

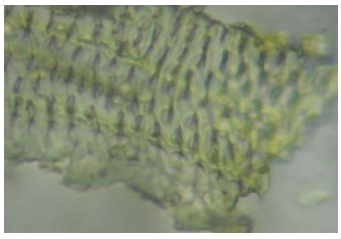

Figure 2: Border pitted vessels of *Chitraka*

Figure 3: Annular vessels of *Haridra*

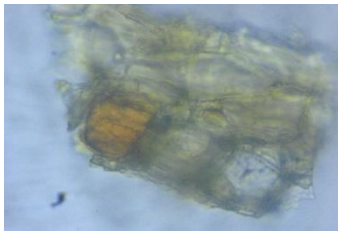

Figure 4: Cork cells of *Musta*

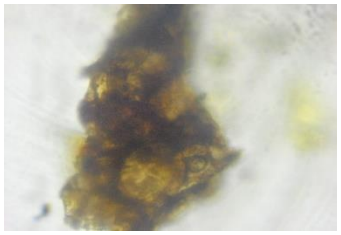

Figure 5: Cork cells with brown content of *Kustha*,

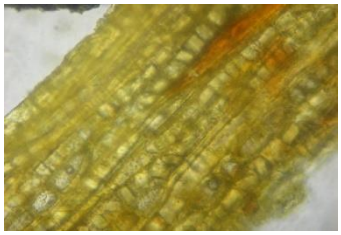

Figure 6: Crystal fibre of *Daruharidra*

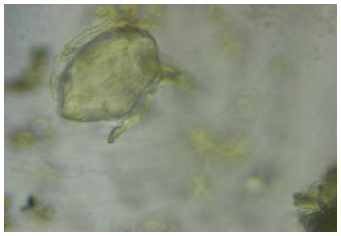

Figure 7: Cystolyth of *Chirabilwa*

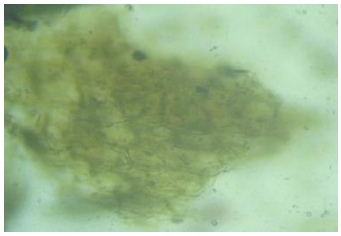

Figure 8: Exoderm cells of *Ativisha*

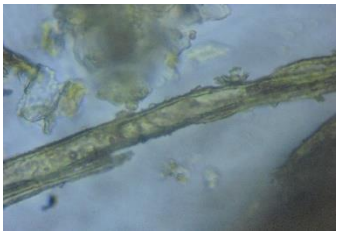

Figure 9: Fibres of *Haimavati*,

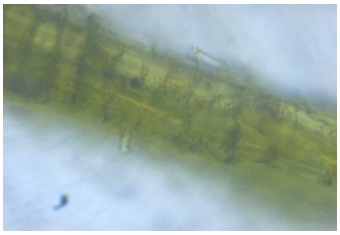

Figure 10: Fibres of *Musta*

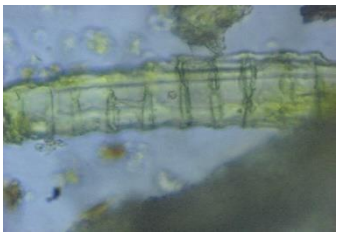

Figure 11: Fibres passing through medullary rays of *Chirabilwa*

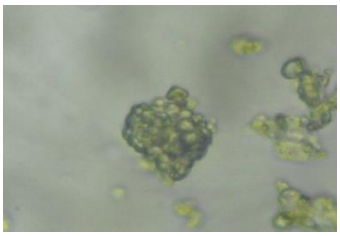

Figure 12: Group of starch grains of *Ativisha*,

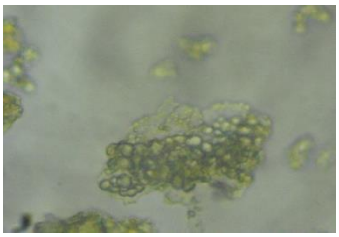

Figure 13: Group of starch grains of *Vacha*

Figure 14: Lignified border pitted *Chitraka*

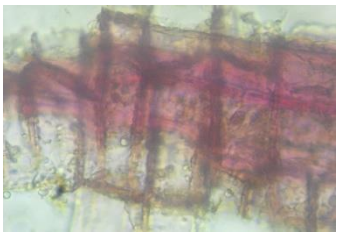

Figure 15: Lignified parenchyma cells of *Chitraka*

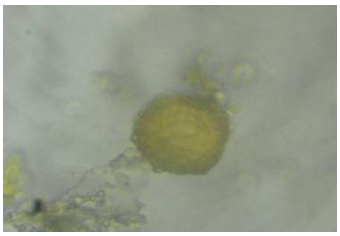

Figure 16: Oil globule of *Kustha*

Figure 17: Oil globule of *Haimavati*

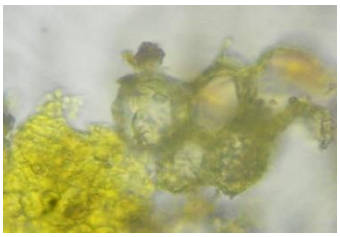

Figure 18: Parenchyma cells of *Haridra*

Figure 19: Prismatic crystal of *Daruharidra*

Figure 20: Prismatic crystal of *Kustha*

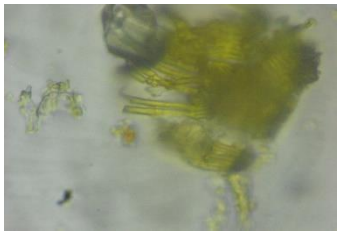

Figure 21: Scalriform vessels of *Haridra*

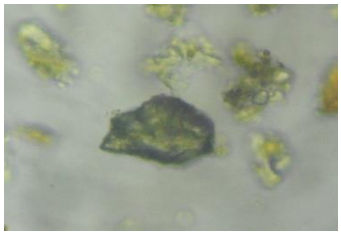

Figure 22: Silica depostion of *Musta*

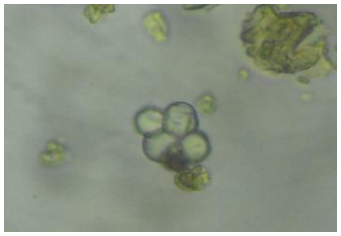

Figure 23: Starch grains of *Chitraka*

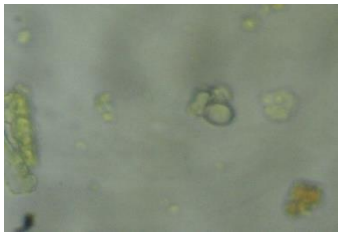

Figure 24: Starch grains of *Haimavati*

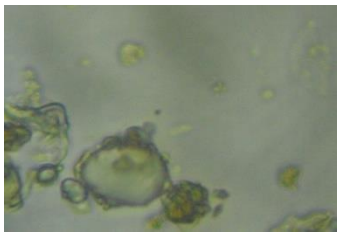

Figure 25: Starch grains of *Katuki*

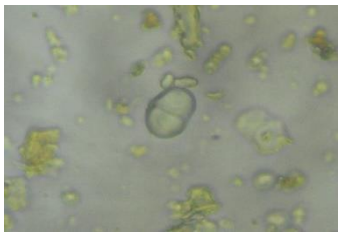

Figure 26: Starch grains of *Vacha*

Figure 27: Stone cells of *Daruharidra*

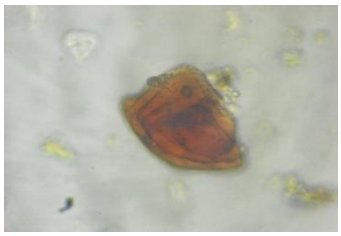

Figure 28: Tannin contant of *Chitraka*

Table 2: Organoleptic characters of *Lekhaniya Maha Kashaya* Powder

Sr. No.	Characters	Results
1	Colour	Yellowish brown
2	Odour	Slightly aromatic
3	Taste	Astringent
4	Touch	Fine powder

Table 3: Physico-chemical analysis: *Lekhaniya Maha Kashaya* Powder

Sr. No	Test	*Lekhaniya* Powder
1	Loss on drying	30 % (w/w)
2	Water soluble extract	12.5 % (w/w)
3	Alcohol soluble extract	5.0 % (w/w)
4	pH	6. 5
5	Ash value	21 % (w/w)

Table 4: Physico-chemical analysis: *Lekhaniya Maha kashaya Yavkuta*

Sr. No	Test	*Lekhaniya Maha kashaya*
1	Loss on drying	6.5 % (w/w)
2	Water soluble extract	17.5 % (w/w)
3	Alcohol soluble extract	9.5 % (w/w)
4	pH	6.5
5	Ash value	9.6 % (w/w)

Plate 1: Densitogram curve of Methanol extract of *Lekhaniya Maha Kashaya* Powder

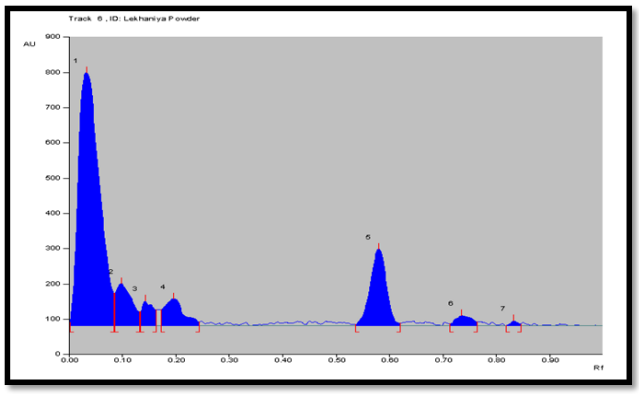

Figure 1-A: at 254 nm

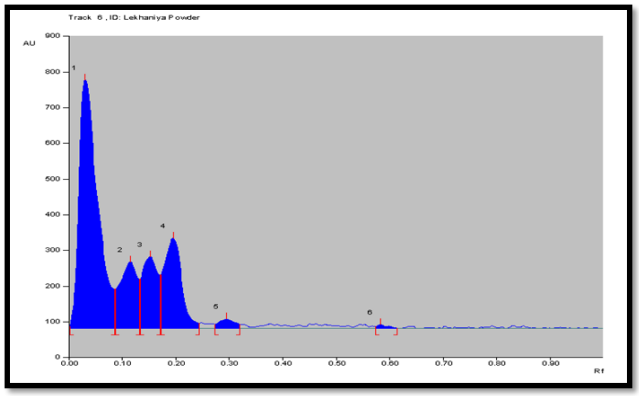

Figure 2-B: at 366 nm

Plate 2: Densitogram curve of Methanol extract of *Lekhaniya Maha Kashaya Yavakut*

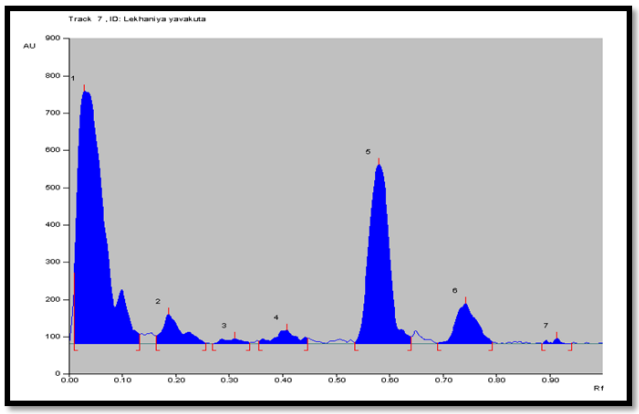

Figure 1-A: at 254 nm

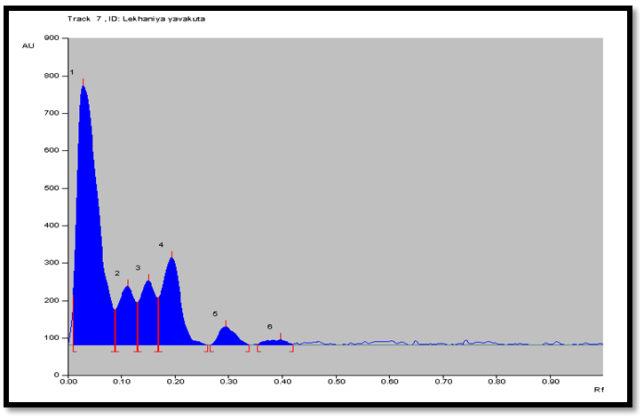

Figure 2-B: at 366 nm

CONCLUSION

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

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