



Pharmacognostical and Pharmaceutical evaluation of *Bilwadi Taila*: A Medicated Oil

Dr. Sejal Kuchhadia¹, Dr. D. B. Vaghela²

¹ 3rd year M.S Scholar, Shalakyta Tantra Department

ITRA Jamnagar, Gujarat, India

sejal.kuchhadia31@gmail.com, 9978007470

²I/C HOD & Associate Professor, Shalakyta Tantra Department,

ITRA Jamnagar, Gujarat, India

drvaghela@rediffmail.com

Abstract: *Bilwa Phala* (*Apakva*) possessing properties like *Katu*, *Tikta* and *Kashaya Rasa*, *Ushna Virya*, *Snigdha-Tikshna Guna*. It is *Vata-Kapha Shamaka* and *Sangrahi*.ⁱ It helps to restore *Vata Dosha* to normalcy. *Bilwadi Taila* is used for *Karnapurana* as *Bilwa Phala* (*Apakva*) is *Vatakaphaghna*, *Ushna Virya*, *Sangrahi*, *Deepana*, *Pachana*. Pharmacognostical and pharmaceutical data obtained after through experiment helps in study of *Bilwadi Taila*. Hence it become very essential to know the every minute details of *Bilwadi Taila* which can be accomplished after doing pharmaceutical and analytical study.

Introduction: *Bilwa* is *Kaphavataghna*, *Shothahara*, *Vedanasthapana* and having nutritive action.ⁱⁱ It has been proved that extract of *Bilwa* has effect on certain gram negative and gram positive bacteria. It has been also proved that the extract of *Bilwa* can cause inhibition of spore germination of fungi.ⁱⁱⁱ

❖ **ORGANOLEPTIC CHARACTERS:**

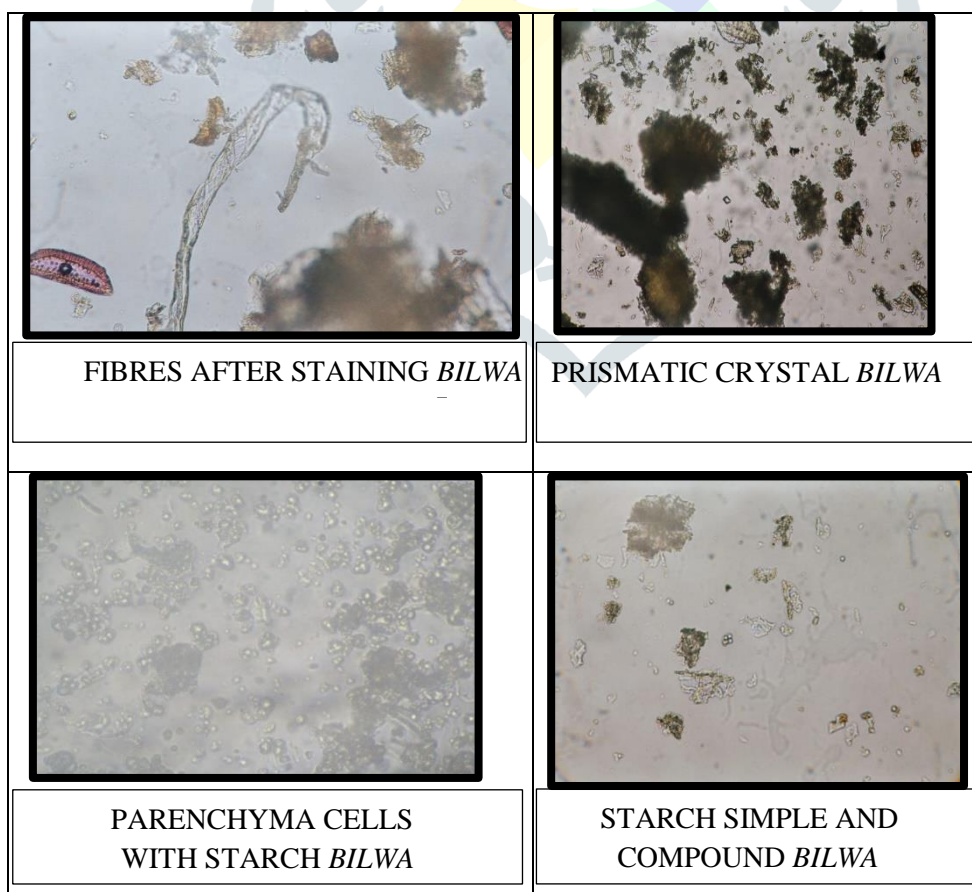
Various organoleptic characters like color, odor, taste and touch of the drug was observed and recorded.

BILWADI TAILA:

Sr. No.	Characters	Observed
1	Colour	Light Yellow
2	Odour	Mild Smell of <i>Tila Taila</i>
3	Taste	<i>Tikta, Kashaya</i>
4	Touch	Oily

❖ **MICROSCOPIC EVALUATION:**

The individual powdered drug were first examined under distilled water for the observation of calcium oxalate crystals and other cellular materials, then stained with Phloroglucinol and conc. HCl for the lignified characters, then stained with iodine to observe the starch grains^{iv}. Raw drugs were separately studied under microscope, the diagnostic characters microphotographs are taken by using Carl Zeiss trinocular microscope.^v Microscopic photos of *Bilwa* (Main ingredient of *Bilwadi Taila*) were given below:



❖ **PHARMACEUTICAL STUDY**

Analytical study of *Bilwadi Taila* was carried out to evaluate following parameters for Standardization.

It includes the following parameters:^{vi}

1. Determination of Specific gravity.
2. Determination of Refractive Index.
3. Determination of Acid insoluble ash.
4. Determination of Iodine Value.
5. Determination of Saponification Value.

OBSERVATION: Obtained value is given in table below.

Table-1

Sr.no.	Parameters	<i>Bilwadi Taila</i>
1.	Specific Gravity at room temp. at 32 ⁰ C	0.8952
2.	Refractive Index at 40 ⁰ C	1.44
3.	Acid value	5.51
4.	Iodine Value	11
5.	Saponification	14.5

• **BILWADI TAILA:**

Bilwadi Taila showed simple and compound grain with hilum, stained starch, pitted parenchyma with fiber, pitted vessels, cork, cortex, phloem, centrally wide vessels, xylem vessels, fibers, xylem parenchyma and medullary rays, cork, cortical par. Cells embedded with starch grain, cork in surface.

HIGH PERFORMANCE THIN LAYER CHROMATOGRAPHY (HPTLC):

HPTLC is a sophisticated and automated form of TLC. It is an invaluable quality assessment tool for the evaluation of botanical materials. It allows for the analysis of a broad number of compounds both efficiently and cost-effectively. Additionally, numerous samples can be run in a single analysis thereby reducing time. With HPTLC, the analysis can be viewed using different wave lengths of light thereby providing a more complete picture of the plant that is typically observed with more specific types of analyses.

Method for HPTLC:

Methanol extract of *Bilwadi Taila* was spotted on pre coated silica gel GF 254 aluminium plates by means of CAMAG Linomate V sample applicator fitted with a 100 μ L Hamilton syringe. The mobile phase consisted of Toluene, Ethyl acetate and Acetic acid in a ratio of 7:2:1 v/v. After development densitometric scan was performed with a CAMAG T. L. C. scanner III in reflectance absorbance mode at 254 and 366nm under control of Win CATS Software.

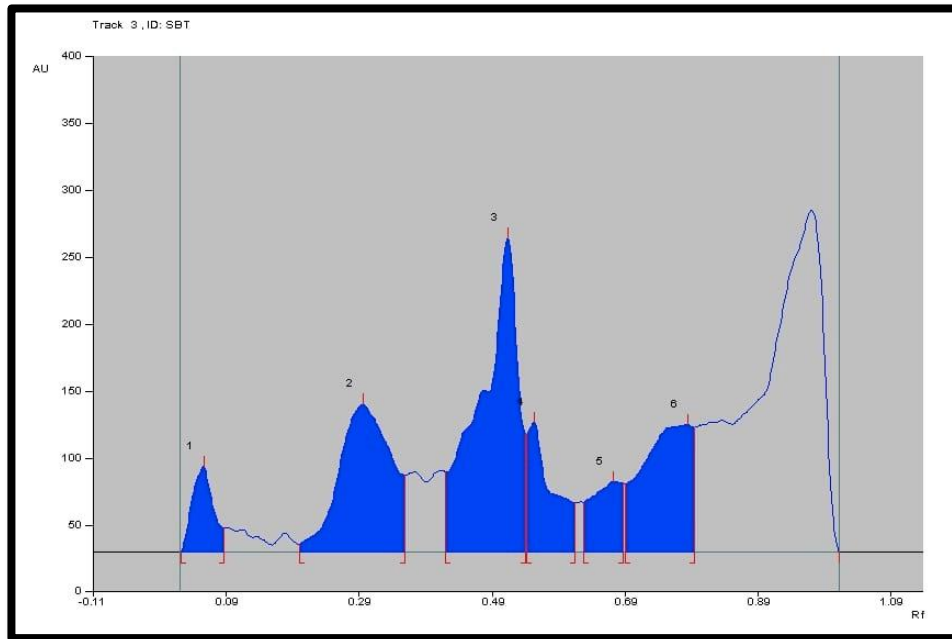
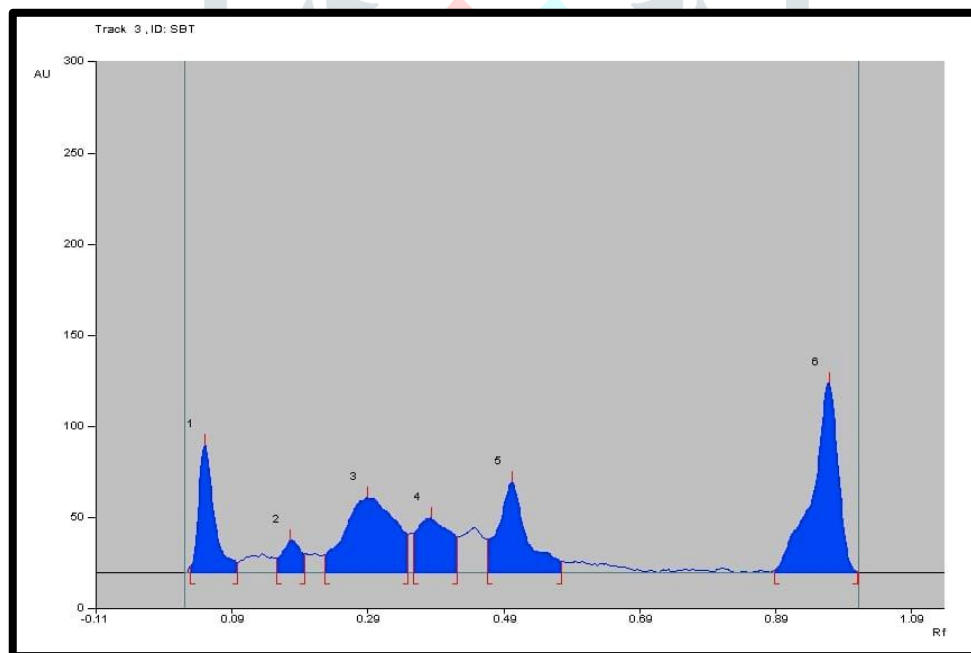
Samples for HPTLC of *Bilwadi Taila*:

HPTLC was carried out after organizing appropriate solvent system. Results are depicted in the. Table No.3 and Plate No.1,2.

Table-2. Results of HPTLC of *Bilwadi Taila*:

Track	Solvent system	Observation under UV radiation			
		254 nm		366 nm	
		No.of spots	Rf value	No.of spots	Rf value
<i>Bilwadi Taila</i>	Toluene (7ml): Ethyl acetate (2ml): Acetic acid (1ml)	6	58.1,104.8,117, 226.5,93.1, 49.3	4	72,41.1,49.3, 101.4

Rf value of short length UV (254nm) showed 6 and UV (366nm) showed 4 spots. Among them spots, one spots i.e. 49.3 is common.

Densitometric analysis of *Bilwadi Taila* at 254nm and 366nm:**Fig1: Peak display at 254 nm****Fig2: Peak display at 366 nm****REFERENCE**

ⁱ Shri Shaligramvaishyavarya, *Shaligramanighantubhushana, Bruhat Nighan*

tu Ratnakar, Guduchyadi Varga Part 7-8. KhemarajaShrikrishnadas Prakashana,1993;p.194-196

ⁱⁱ *Agnivesha, Charaka Samhita* Redacted by Charaka and Dhridabhala with *Ayurveda Deepika*, By Shri Chakrapani, edited by Trikamji Acharya, *Sutrasthana Ch.25, Ver.40*, Varanasi: Chaukhambha SanskritSansthana,5th edition; 1982.

ⁱⁱⁱ Prabodh Chander, et al. "A review on Bael tree. 2007

^{iv} Khandelwal KR. Practical pharmacognosy-techniques and experiments, 19th ed. India: Nirali Prakashan; 2008; p.26-27.

^v Trease, G.E., Evans, W.C. Pharmacognosy, 12th Ed. Bailliere Tindall, Eastbourne. U.K. 1983; p.95-99, 512-547.

^{vi} Anonymous, API-part II, vol. II, first edition.

