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Short Communication

Pharmacognostical evaluation of *Psoralea corylifolia* Linn. seed

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ABSTRACT

Psoralea corylifolia Linn. belonging to *Fabaceae* family is an important endangered plant that has been therapeutically used to treat different pathological manifestations since ages. It is commonly known as *Bakuchi* in Sanskrit. Though it is an important plant, till date, no pharmacognostical reports have been available on its seed. A lot of adulterations are also present in the market. The present study is aimed towards evaluating pharmacognostical and histochemical characteristics of the seeds of *P. corylifolia* Linn. in detail. Macroscopic and microscopic pharmacognostical characters of seeds and histochemical studies were noted by following standard methods. Pharmacognostical evaluation of seed shows the presence of volatile oil, silica deposits and stone cells. The observations found in current work can be considered as reference standards in future studies.

1. Introduction

Various plant species are mostly used in Ayurveda, and their good therapeutic effect is directly proportional to genuine raw material. They are obtained from geographical or commercial sources. Hence, correct identification of raw material becomes mandatory [1]. *Psoralea corylifolia* Linn (Fabaceae), a medicinally important plant, indigenous to tropical and subtropical regions of the world, is reported in the Indian Pharmaceutical Codex, the Chinese, British and American Pharmacopoeias and in different traditional systems of medicine, such as, Ayurveda, Unani and Siddha [2]. *P. corylifolia* Linn. commonly known as '*Bakuchi*' is conventionally used in *Ayurvedic* system of medicine for the treatment of various pathological conditions but especially for treatment of skin disorders such as psoriasis, leucoderma and leprosy in the form of internal medications [3] as well as external applications [4]. *P. corylifolia* Linn. seed has been reported to contain several phytoconstituents including coumarins and flavone components, such as psoralen, isopsoralen, psoralidin, neobavaisoflavone, bavachin, corylin, bavachalcone [5] and possess antibacterial, antiinflammatory [6], antifungal [7], antioxidant [8,9], antifilarial [10], estrogenic [11], antitumor [12], and immunemodulatory activity [13]. Like many other important botanical treasures, *Bakuchi* these days is also getting adulterated raising a question to its genuinity. Thus, it is important to know the identification points on which it can be authenticated. Review of literature reveals that Bakuchi seed has not been studied in detail for its pharmacognostical characters. Considering this, an attempt has been made to establish preliminary pharmacognostical profile of seed which may be considered as a reference standard for future studies. This helps in further research on seeds and other parts of the same plant and also other plant species. Hence, the present work was undertaken to establish certain identification standards of *P. corylifolia* Linn.

2. Materials and methods

The fruits of *P. corylifolia* Linn were collected from Pharmacy, Gujarat Ayurved University, Jamnagar. Botanical identification was done with the help of various floras, and it was authenticated at the Pharmacognosy lab, Institute for Post Graduate Teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar. Organoleptic characters like color, taste, touch and odor were recorded. Thin free hand sections were studied with and without

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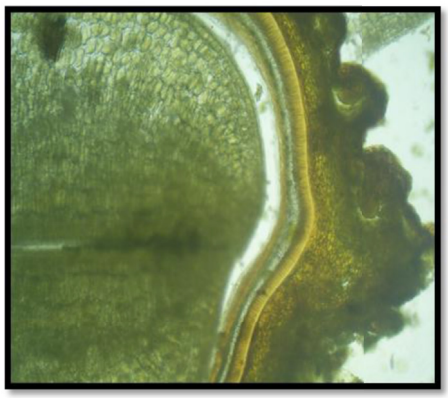
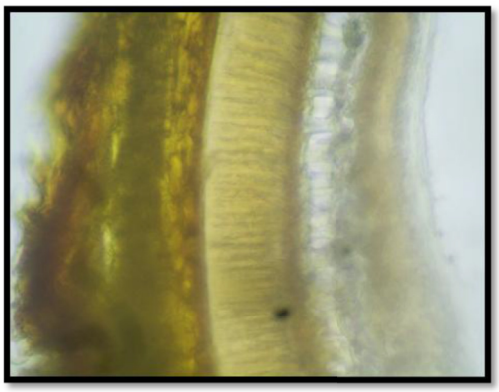
1. Natural plant

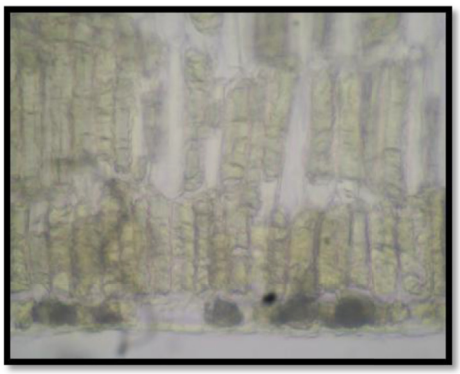
2. Micro-measurement of seed



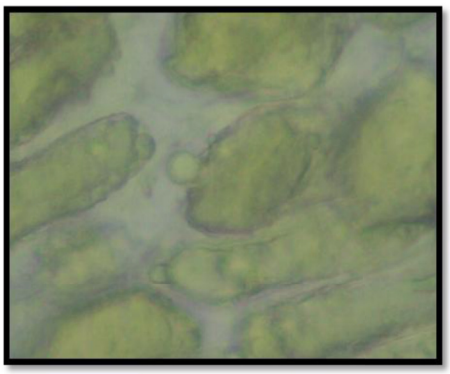
3. Testa with seven differentiating layers



4. Endocarp with outer single layer of barrel-shaped cells



5. Endosperm cells



6. Inner endosperm with crystalline material

Plate 1. Transverse section of *Bakuchi*.

Table 1
Organoleptic characters of *P. corylifolia* Linn seed.

Sr. no.	Organoleptic characters	Observation
1	Color	Dark brownish black
2	Odor	Oily
3	Taste	Characteristic
4	Touch	Rough

staining (phloroglucinol and concentrated HCl). Powder microscopy of powder #60 was carried out [14]. Photomicrographs were taken using Carl Zeiss trinocular microscope attached to camera. Histochemical studies were carried out by taking free hand sections of seed treated with various reagents, and we found tannin, mucilage, etc. [15]. Physico-chemical profiling was carried out from powder [16].

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