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A Detailed Examination on Vimala (*Acacia concinna linn.*) – BERRY

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ABSTRACT :

Acacia concinna Linn. (Cowpea) prevail a medicinal hearb especially get bigger inside equatorial jungle about from the south greenland a certain berry about shrub have being warn as clean wool an try own exists transfer not here inside Easterntdirect toward these originality together with evaluation about Acacia Concinna Linn berry. Current notepaper describe at length tincture, elemental framework as well as it's Thin Layer Chromatography about berry. The result shows the presence of saponin cavity in mesocarp, stone cells in pericarp region, pitted vessels were observed. The phytochemical analysis of the prepared sample by implementing organoleptic, microscopic, physicochemical, preliminary phytochemical screening and quantitative estimation shows 8.04 % then after Chromatographic study to ensure suitable parameters for its quality control.

Keywords : Shikakai, Pharmacognosy, Phytochemistry, HPTLC

INTRODUCTION:

Ayurveda the World's most ancient yet uniquely futuristic system of Healing and Acacia concinna Linn. (Leguminosae) is a medicinal plant that grows in tropical rainforests of southern Asia and the fruits of this plant are used for washing hair, for promoting hair growth, as an expectorant, emetic, and purgative. (Gupta, G. L et. Al 1971) Although the pods of this plant are known to contain several saponins based on acacic acid, previous chemical examinations only resulted in the identification of flavonoids1 and monoterpenoids (Sekine, T et al. 1997). For Indian herbal industry, there is a huge export opportunity (L.K.Dwivedi et al 2008), however this opportunity is full of challenges, regulatory, quality, consumer protections, and market compositions Thee strength of culture must exist captivated go through wealthy origin about pharmaceutical treatment rather profit. Technological Nowadays due to the hectic sedules, it became mandatory for the clinician to depend on pharmacies for their medicinal requirement but in the name of Modernization it started lacking quality and efficacy up to the mark. Scientific details concerning pharmacognostical, Quantifiable eyeglass, and biometric identification investigation about berry medicine never accessible abroad. On afford writing paper writer attempt directed toward attain greter than exact insructive tasks.

MATERIALS AND METHODS

Collection of Drugs : The matured fruits were personally collected from Charmadi ghat, Karnataka from mother plants during the month of January to February. The identification and authentification of the plant was confirmed by comparing its characters, mentioned in various floras, herbariams and with the help of Dept. of Pharmacognosy, Gujarat Ayurved University Jamnagar

Pharmacognostical Study :

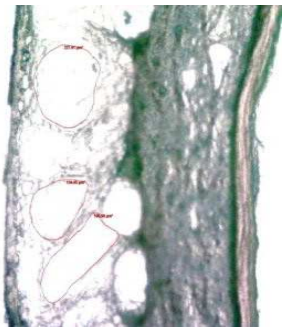
Macroscopic Characters (Anonymous, 2004) : Macroscopically details of the respective part are noted by observing it with necked eyes or with the aid of magnifying lens. Inside these explanation, common state about an these medicine shade, smell, falvour, feel and others exists well known. Medicines tin exists recognize along these support about indeed greter than at most inside whole state.

Habitat Of Shikakai :

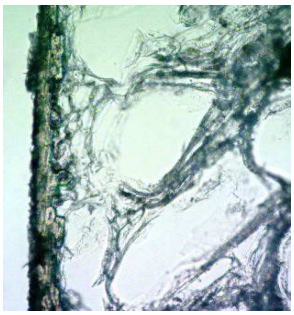
Microscopy: Transversal about berry exist ready in good time for latitude portion conduct oneself towards accompanied by jay juice, initial notice into carbonated water via direct clear structure.

Quantitative Microscopy: The transverse sections were scientifically measured the cellular constituents like Parenchyma cells, Lysogenous cavity, stone cells by trial and error method and final values are considered.

Quantitative microscopy:



Saponin cavity



Mesocarp

Microscopy:

- Crossways parts about berry exist finfinished next to loose palm.
- Saponin cavity.
- Mesocarp.

Powder Microscopy : coarse powder (60 #).various slides of the finely powdered drugs were prepared by using distilled water, glycerin as mounting mediums and observe for different tissue and cell contents. The powder was also cleared by using chloral hydrate parts therapy along joy joice, initial notice inside purify water to locate crystal system. Then stain with Flouroglusinol and conc. HCL to observe lignified elements . microphotographs were took under Coral Zeiss Binocular microscope attached with camera.

Plate No. 2 : Powder microscopy

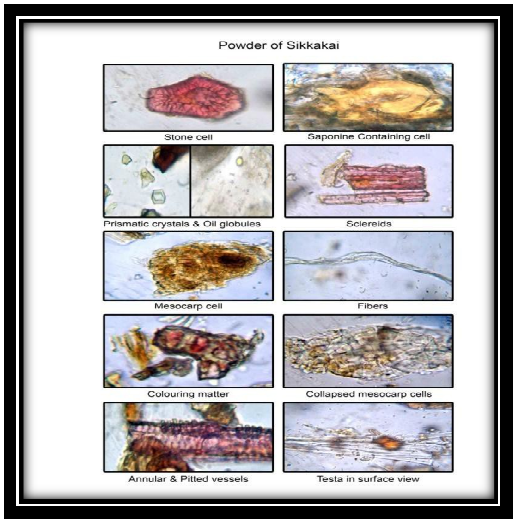


Plate No. 3: T.S of Shikakai Fruit

Solutions and observed under microscope for different tissues. The powders were treated with phloroglucinol followed by HCL for differentiation between lignified and non lignified tissues. Powders were also treated with iodine solution for the presence or absence of starch grain.

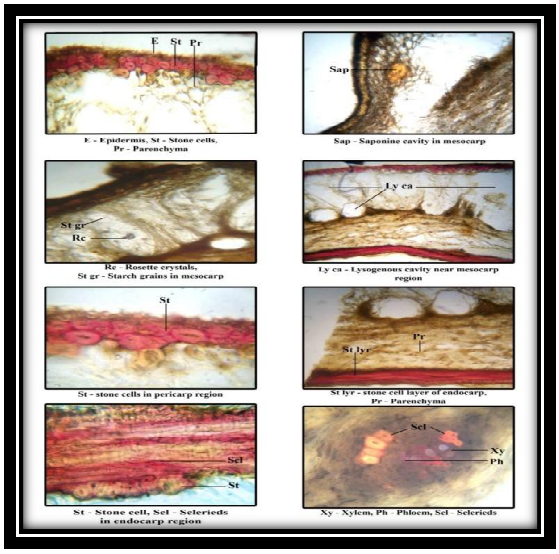


Plate No. 3

Physicochemical Parameters: Physicochemical study of the fruit powder was carried out by using various physiochemical parameters Such as Loss on drying, Ash value, Acid insoluble ash, Extractive values e.g. water and methanol, pH mentioned in References.

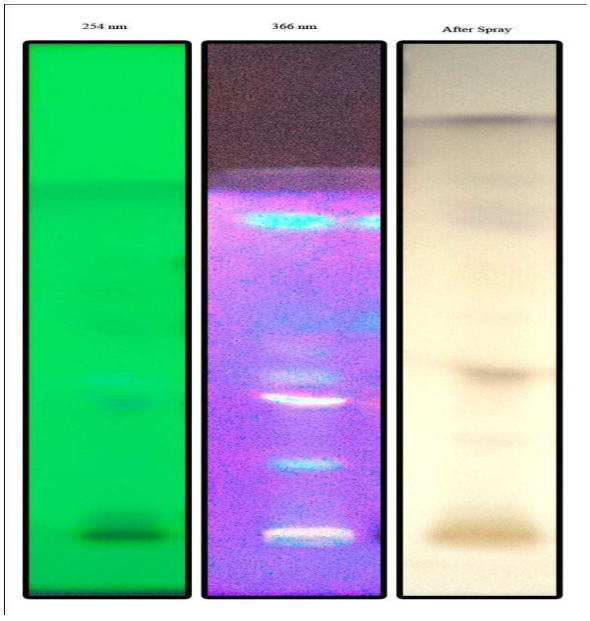
Qualitative Study : In this study, presence of different chemical constituents like saponin, Sugar, phenolic compounds etc. arestudied in the plant material and quantative estimation of saponin was carried out.9

Chromatographic Evaluation (S. Ravi Shankar Et Al 2001): TLC was carried out after making the sample preparation and taken the appropriate solvent system by taking the sample in the Methanolic extract.

Sample Preparation: 2gm accurately weighed sample was taken and 6N HCL was added to hydrolyze the sample , reflux for 6 hr and taken out from water bath, filtered and evaporated. The remaining residue was taken in Alcohol.

Chromatographic development (HPTLC)

HPTLC Study:



HPTLC was performed for the normal phase separation of components present in Methanol extract. The plate was developed in solvent system Toluene: Ethyl acetate: formic acid (6:2: 0.5).The plate was scanned by U.V. (254nm& 366nm).afterwards colour reaction was observed by spraying the plate with anis aldehyde H2SO4.The results obtained are shown in table no.

Chromatographic conditions (HPTLC):

Application mode	:	Camag Linomat V
Development Chamber	:	Camag Twin trough Chamber.
Plates	:	Precoated Silica Gel GF254 Plates.
Chamber Saturation	:	30 min.
Development Time	:	30 min.
Development distance	:	7 cm.
Scanner	:	Camag Scanner III.
Detection	:	Deuterium lamp, Tungsten lamp
Tungsten lamp		
Data System	:	Win cats software

RESULT AND DISCUSSION:

Macroscopical characters: Pods linear oblong, straight or bent constricted between seeds. Surface unevenly reticulated due to longitudinal and transversally running ridges: longitudinal lateral sutures distinct, externally dark brown, internally pale brown to buff, fracture fibrous. Fine powder irritates the mucous membrane of the nostrils producing sternutatory effect.

Microscopy: T.S. of fruit shows outer Pericarp, epicarp, middle Mesocarp and inner endocarp. Pericarp shoes outer radially and inner tangentially elongated cells layers of epicarp covered with thin cuticle. Hypodermis consists of 3 to 5 rows of stone cells, the outer most 2 layers being very small in size followed by narrow bands of collapsed cells; Mesocarp is a wide zone of parenchyma traversed with obliquely cut vascular bundles encircled by collapsed cells. Large saponin containing cells are located at mesocarp, plenty of simple starch grains and few rosette crystals of calcium oxalate traversed throughout the parenchymatous cells of Mesocarp. Endocarp is composed of outer 4 to 5 rows of thick walled spherical parenchymatous zone followed by very narrow layer of scleroids and innermost layer with some stone cells followed by parenchymatous wider zone containing yellowish exudates. Plate…..

Preliminary Phytochemical Screening: On preliminary phytochemical screening, the fruit powder of Acacia Concinna Linn. Shows the presence of saponin, Alkaloid, sugar flavanoids as shown in table No.3

Table: Test for Presence of Various Phyto constituents

Phyto constituents	Results
Saponin	+ ve
Alkaloid	+ ve
Sugar	+ ve
Tannin	- ve
Flavanoids	+ ve
Anthraquinone glycoside	- ve

CONCLUSION:

These pharmacognostical learning as well as chemical property about these *Ficus concinal col*. Fruit has been carried out for the first time. This could serve in the identification and preparation of a monograph of the plant. That lives an considerable stages as well as that exact need and lengthy word learning via. Gangue therapeutic healing success about berry via. Accept as while these medicines.

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