ISSN: 0974-2115
www.jchps.com Journal of Chemical and Pharmaceutical Sciences

PHYTOCHEMICAL EVALUATION OF *VITEX PUBESCENCE*, *VITEX PENDUCULARIS* AND *VITEX AGNUSCASTUS*

K PHANI*, A RAVI KUMAR
Department of Pharmacognosy Bapatla College of Pharmacy, Bapatla 522101 Andhra India
***Coreesponding author: E-Mail: phanikodali.1@gmail.com**

ABSTRACT

In the present study, an attempt was made to investigate Phytochemical evaluation of *Vitex pubescence Vitex penducularis Vitex agnuscastus* The crude drug powder extracts of the leaves of the above plants were taken for the study. The Phytochemical Screening was done for the selected plants. Phenolic compounds, tannins, flavonoids, cardiac glycosides, and alkaloids were present in *Vitex pubescence.* Alkaloids, flavanoids, carbohydrates, glycosides and tannins were present in *Vitex anguscastus.* Alkaloids, saponins, flavanoids, carbohydrates and anthraquinone glycosides were present in *Vitex penducularis*

KEY WORDS: Phytochemical screening, *Vitex species* Plant species.

1. INTRODUCTION

Herbal medicine is also known as botanical medicine or phytomedicine-refers to using plants seeds, flowers, roots for medicinal purpose. Herbalism has a long tradition of use of outside of conventional medicine. It is becoming more main stream as improvements in analysis and quality control along with advances in clinical research show the value of herbal medicine in the treating and preventing disease. The medicinal action of plants is unique to a particular plant species, consistent with the concept that the combination of secondary metabolites in a particular plant is taxonomically distinct for three medicinal plants and their description and uses respectively. Here in the present study three plants were taken for phytochemical screening and plants extracts crude dried powdered drug were taken and evaluated. The phytochemical constituents were studied by qualitative analysis for performing various chemical tests.

2. MATERIALS AND METHOD

Plant materials: The leaves of plants species*Vitex pubescence Vitex penducularis Vitex agnuscastus* were authentified by Prof. V.Satyanarayana, Department of Plant Breeding, Bapatla Agricultural College, Bapatla, Andhra Pradesh, India. They were collected from different areas of Guntur, Prakasham and Krishna districts of Andhra Pradesh, India.

Solvent Extraction: The leaves of *Vitex pubescence, Vitex penducularis* and *Vitex agnuscastus* were collected, washed, dried and powdered separately. 50g of dried powder of the leaves was weighed and transferred into a conical flask and it was macerated with sufficient amount of ethanol for about a week days. Process is repeated with water. The whole mixture was filtered and filtrate was collected, concentrated in a china dish on a hot plate till the residue was obtained. The extracts was collected, labeled and stored for further experimental use.

Qualitative analysis for detection of Carbohydrates, Alkaloids, Cardiac Anthraquinone, Saponin Glycosides, Flavonoids and Tannins: The extracts and crude dried powders of *Vitex leucoxylon, Vitex penducularis and Vitex agnuscastus were* subjected to qualitative analysis for presence of chemical constituents.

3. RESULTS AND DISCUSSION

The study of the chemical constituents and the active principles of the medicinal plants have acquired a lot of importance all over the world. The present study includes the phytochemical screening of the plants *Vitex leucoxylon, Vitex pencucularis* and *Vitex agnuscastus*. The plants were collected and were authentified. Then they were shade dried and powdered and were subjected to phytochemical screening.

Table.1. Phytochemical evaluation of *Vitex pubescence*

Chemical tests	Result	Chemical tests	Result	Chemical tests	Result
Test for carbohydrates		**Test for alkaloids**		**Test for flavanoids**	
Molisch's test	Positive	Hager's test	Positive	Lead acetate test	Positive
Fehling's test	Positive	Wagner's test	Positive		
Benedict's test	Positive				
Barfoed's test	Positive				
Test for saponins		**Test for steroids**		**Test for cardiac glycosides**	
Foam test	Negative	Lieberman			
		Burchard test	Negative	Legal test	Positive
		Salkowski test	Negative	Keller-killiani test	Positive
Test for anthraquinone glycosides					
Borntrager's test	Negative				

Table.2. Phytochemical evaluation of *Vitex penducularis*

Chemical tests	Result	Chemical tests	Result	Chemical tests	Result
Test for carbohydrates		**Test for alkaloids**		**Test for flavanoids**	
Molisch's test	Positive	Hager's test	Positive	Lead acetate test	Positive
Fehling's test	Positive	Wagner's test	Positive		
Benedict's test	Positive				
Barfoed's test	Positive				
Test for saponins		**Test for steroids**		**Test for cardiac glycosides**	
Foam test	Negative	Lieberman			
		Burchard test	Positive	Legal test	Positive
		Salkowski test	Positive	Keller-killiani test	Positive
Test for anthraquinone glycosides		**Test for tannins**			
Borntrager's test	Positive	$FeCl_3$test	Positive		
		Acetic acid test	Positive		
		$KMnO_4$ test	Positive		

Table.3. Phytochemical evaluation of *Vitex agnucastus*

Chemical tests	Result	Chemical tests	Result	Chemical tests	Result
Test for carbohydrates		**Test for alkaloids**		**Test for flavanoids**	
Molisch's test	Positive	Hager's test	Positive	Lead acetate test	Positive
Fehling's test	Positive	Wagner's test	Positive		
Benedict's test	Positive				
Barfoed's test	Positive				
Test for saponins		**Test for steroids**		**Test for cardiac glycosides**	
Foam test	Negative	Lieberman			
		Burchard test	Negative	Legal test	Negative
		Salkowski test	Negative	Keller-killiani test	Negative
Test for anthraquinone glycosides					
Borntrager's test	Positive				

4. CONCLUSION

The screening of phytochemical constituents of plants *Vitex pubescence, Vitex penducularis* and *Vitex agnuscastus* indicated the presence of carbohydrates, flavonoids, alkaloids and steroids in common The plants contains more metabolites there is need for further investigations using fractionated extracts and purified chemical components.

REFERENCES

Annapurna J, Antimicrobial activity of *Ixora coccinea* Leaves, Fitoterapia 74, 2003, 291-293.
B Tosi, B Tirillini, A Donini, Bruni A, International journal of Pharmacognosy , 33, 1995, 353-355.

Chatopadyay, Antibacterial activity of Black Myrobalan Fruit of *Terminalia chebula* against uropathogen E.coli, Pharmacognosy Review, 11, 2007, 212-215.

GE Trease, WC Evans, Pharmacognosy, 13 th ed.,Balliere Tindall, London,1987, 61-62.

Harborne JB, Phytochemical methods: A guide to modern techniques of plant analysis, Third edition. London: Chapman and hall, 1998, 107-108

Khyade, M. S. and Vaikos N. P, Phytochemical Screening and Antibacterial activity of Leaves of *Alstonia scholaris* African journal of Biotechnology, 8 (22), 2009, 6434-6436.

Nikhal SB, Dambe PA, Ghongade DB, Goupale DC, Hydroalcoholic extraction of *Mangifera indica* (Leaves) by Soxhelation, International of Pharmaceutical Sciences, 2(1), 2010, 30-32.

Parekh J, Karathia N, Chanda S, Evaluation of Antibacterial activity and Phytochemical Analysis of *Bauhinia variegate* L Bark, African Journal of Biomedical Research, 9, 2006, 53-56.

Pullok K. Mukherjee, Quality Control of Herbal Drugs, I- Edition, 2002, 186-219 & pg No. 428,441,448

S.Wongseripipatana, Indole Alkaloids from the fruits of *Alstonia scholaris*, Thia J. Pharm. Sci, 28 (3-4), 2004, 173-180.

Vadivu R, Pharmacognostical Standardization of Leaves of *Ixora coccinea* Linn, J. Pharm. Sci. & Res., 1, 2009, 151-157.

Vaidyanath Iyer Thankamani, Anti-microbial activity of *Alstonia scholaris* Flowers; International Journal of Pharma, Research and Development (IJPRD), 3(4), 2011, 172-178