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Preliminary Phytochemical Screening of Tecoma Stans

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Abstract
In the present study, an attempt was made to investigate Phytochemical evaluation of different parts of *Tecoma Stans.* 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.

Keywords
Phytochemical screening, *Tecoma Stans*

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INTRODUCTION:
Herbal medicine 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.

EXPERIMENTAL SECTION:
Plant Materials
The different parts of plants *Tecoma Stans* were authentified by Mrs N Deepa Ramani, Associate Professor Nimra College of Pharmacy They were collected from different areas of NTR district of Andhra Pradesh.

Tecoma stans twig

Qualitative analysis Experimental Procedure

TEST FOR CARBOHYDRATES

TEST	PROCEDURE
MOLISCH'S TEST	200 mg of extracts were dissolved separately in 5ml of water and filtered. 2 ml of the above sample solution is placed in a test tube. Two drops of the Molisch reagent is added. The solution is then poured slowly into a tube containing 2 ml of concentrated sulphuric acid and observed.
FEHLING'S TEST	1ml of Fehling's solution A and 1ml of Fehling's solution B were added to 100mg of extracts separately. They were heated on a boiling water bath for 5 min and observed.
BENEDICT'S TEST	To the 150 mg of each extracts, 2ml of Barfoed's reagent was added. Then the mixture was heated on a boiling water bath for 5 min, cooled and observed.

TEST FOR ALKALOIDS

To 250 mg of each extracts, 10 ml of dilute HCl was added, mixed and filtered. To the filtrate the following reagents were added and tested.

TEST	PROCEDURE
WAGNER'S TEST	2 ml of Wagner's reagent was added to the above filtrate solution and observed.
HAGER'S TEST	To the 2 ml of above filtrate solution, 2 ml of picric acid was added and observed.

TEST FOR GLYCOSIDES

The extract was tested for the presence of

- Saponin glycosides
- Cardiac glycosides

TEST FOR SAPONIN GLYCOSIDES

TEST	PROCEDURE
FOAM TEST	To 200 mg of each extracts, 15 ml of distilled water was added, shake it well and observed.

TEST FOR CARDIAC GLYCOSIDES

TEST	PROCEDURE
LEGAL'S TEST	To 50 mg of each extracts, 1 ml of pyridine, 1 ml of Sodium nitro prusside solutions were added and observed.
KELLER-KILIANI TEST	To 50 mg of each extracts, 2 ml of glacial acetic acid, 1 ml FeCl3 solution were added, heated and then cooled. This was transferred to a test tube containing 2ml conc. H2SO4and observed.

TEST FOR FLAVANOIDS

TEST	PROCEDURE
LEAD ACETATE TEST	To the 100 mg of each extracts, lead acetate (5 ml) was added and observed.

TEST FOR TANNINS

To 100 mg of each extracts, the following reagents were added and observed.

a) 5 ml of 5% w/v $FeCl_3$ solution.
b) 5 ml acetic acid solution.
c) 5 ml dil. $KMnO_4$ solution.
d)

TEST FOR STEROIDS

TEST	PROCEDURE
SALKOWSKI TEST	To 100 mg of each extracts, 2 ml of CHCl3, 2 ml of conc. H2SO4were added, mixed thoroughly and both the layers were observed for color.

Phytochemical Evaluation of *Tecoma stans*

Table 1:

S.NO.	CHEMICAL TESTS	RESULT
1	**TEST FOR CARBOHYDRATES** **A.** Molisch's test **B.** Fehling's test **C.** Benedict's test **D.** Barfoed's test	Positive
2	**TEST FOR ALKALOIDS** **A.** Hager's test **B.** Wagner's test	Positive
3	**TEST FOR FLAVANOIDS** Lead acetate test	Positive
4	**TEST FOR SAPONINS** A. Foam test	Negative
5	**TEST FOR STEROIDS** **A.** Lieberman burchard test **B.** Salkowski test	Negative Positive
6	**TEST FOR CARDIAC GLYCOSIDES** **A.** Legal test **B.** Keller-killiani test	Positive Positive

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 present study includes the phytochemical screening of different parts of plants of *Tecoma Stans.* The investigation showed that *Tecoma stans* contains carbohydrates, alkaloids, flavanoids, cardiac glycosides steroids and tannins as given in Tables.

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REFERENCES:

1. Parekh J, Karathia N and Chanda S. Evaluation of Antibacterial activity and Phytochemical Analysis of Bauhinia variegate L Bark African Journal of Biomedical Research. 2006; 9:53-56.
2. Nikhal SB, Dambe PA, Ghongade DB and Goupale DC. Hydroalcoholic extraction of Mangifera indica (Leaves) by Soxhelation International of Pharmaceutical Sciences. 2010;2(1):30-32.
3. Trease GE and Evans WC. Pharmacognosy, 11 th ed, Brailliar Tindall Can. Macmillian, London, 1989.
4. Trease GE and Evans WC. Pharmacognsy, 13 th ed., Balliere Tindall, London.1987;61-62.
5. Tosi B, Tirillini B, Donini A and Bruni A. International Journal of Pharmacognosy. 1995; 33:353- 355.
6. Harborne JB. Phytochemical methods: A guide to modern techniques of plant analysis, third edition. London: Chapman and hall. 1998;107-108
7. Chatopadyay. Antibacterial activity of Black Myrobalan Fruit of Terminalia chebula against uropathogen E coli Pharmacognosy Review. 2007; 11:212-215.
8. Vaidyanath Iyer Thankamani. Anti-microbial activity of Alstonia scholaris Flowers; International Journal of Pharma Research and Development (IJPRD). 2011;3(4):172-178
9. Khyade MS and Vaikos NP. Phytochemical Screening and Antibacterial activity of Leaves of Alstonia scholaris African journal of Biotechnology. 2009; 22:6434-6436.
10. Wongseripipatana S. Indole Alkaloids from the fruits of Alstonia scholaris Thia J Pharm Sci. 2004;28(3-4):173-180.
11. Pullok K Mukherjee. Quality Control of Herbal Drugs; I-Edition. 2002;186-219,428,441,448
12. Annapurna J. Antimicrobial activity of Ixora coccinea Leaves Fitoterapia. 2003; 74:291-293.Vadivu R. Pharmacognostical Standardization of Leaves of Ixora coccinea Linn J Pharm Sci & Res. 2009;1:151-157.
13. http://srgrimes.nerium.com/
14. Das C, Mohanty A, Sahoo DC, Dash S, Wound healing potential of methanolic extract of tecoma stans Linn, Leaf, Drug Invention Today, 2010,2[8]:373-75.
15. Gharib Naseri MK, Asadi Moghaddam M, Bahadoram S, Antispasmodic effect of Tecoma stans(L) Juss Leaf extract on rat ileum, DARU, 2007, 15(3): 123-28.
16. Marzouk M, Gamal-Eldeen A, Mohamed M, El SAyed M, Anti-proliferative and anti-oxidant constituents from Tecoma stans, Z. Naturforsch. 2006, 61: 783-91.