

## PRELIMINARY PHYTOCHEMICAL EVALUATION OF *CAESALPINIA SAPPAN SARACA INDICA*

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### ABSTRACT

In the present study, an attempt was made to investigate Phytochemical evaluation of different parts of *Caesalpinia sappan Saraca indica*. 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, *Caesalpinia sappan Saraca indica*

### 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 *Caesalpinia sappan Saraca indica* were authenticated. They were collected from different areas of Guntur district of Andhra Pradesh.

#### Qualitative analysis Experimental Procedure

##### TEST FOR CARBOHYDRATES

TEST	PROCEDURE
<b>MOLISCH'S TEST</b>	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.
<b>FEHLING'S TEST</b>	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.
<b>BENEDICT'S TEST</b>	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
<b>WAGNER'S TEST</b>	2 ml of Wagner's reagent was added to the above filtrate solution and observed.
<b>HAGER'S TEST</b>	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
<b>FOAM TEST</b>	To 200 mg of each extracts, 15 ml of distilled water was added, shake it well and observed.

**TEST FOR CARDIAC GLYCOSIDES**

TEST	PROCEDURE
<b>LEGAL'S TEST</b>	To 50 mg of each extracts, 1 ml of pyridine, 1 ml of Sodium nitro prusside solution were added and observed.
<b>KELLER-KILIANI TEST</b>	To 50 mg of each extracts, 2 ml of glacial acetic acid, 1 ml FeCl <sub>3</sub> solution were added, heated and then cooled. This was transferred to a test tube containing 2ml conc. H <sub>2</sub> SO <sub>4</sub> and observed.

**TEST FOR FLAVANOIDS**

TEST	PROCEDURE
<b>LEAD ACETATE TEST</b>	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<sub>3</sub> solution.
- b) 5 ml acetic acid solution.
- c) 5 ml dil. KMnO<sub>4</sub> solution.

**TEST FOR STEROIDS**

TEST	PROCEDURE
<b>SALKOWSKI TEST</b>	To 100 mg of each extracts, 2 ml of CHCl <sub>3</sub> , 2 ml of conc. H <sub>2</sub> SO <sub>4</sub> were added, mixed thoroughly and both the layers were observed for color.

**Phytochemical Evaluation of *Ceasalpinia Sappan*****Table 1:**

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

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Table 2:

S.NO.	CHEMICAL TESTS	RESULT
1	<b>TEST FOR CARBOHYDRATES</b> A. Molisch's test B. Fehling's test C. Benedict's test D. Barfoed's test	Positive Positive Positive Positive
2	<b>TEST FOR ALKALOIDS</b> A. Hager's test B. Wagner's test	Positive
3	<b>TEST FOR FLAVANOIDS</b> Lead acetate test	Positive
4	<b>TEST FOR SAPONINS</b> Foam test	Negative
5	<b>TEST FOR STEROIDS</b> A. Lieberman burchard test B. Salkowski test	Positive Positive
6	<b>TEST FOR CARDIAC GLYCOSIDES</b> A. Legal test B. Keller-killiani test	Positive Positive
7	<b>TEST FOR ANTHRAQUINONE GLYCOSIDES</b> Borntragers test	Positive
8	<b>TEST FOR TANNINS</b> A. FeCl <sub>3</sub> test B. Acetic acid test C. KMnO <sub>4</sub> test	Positive 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 *Caesalpinia sappan* *Saraca indica*. The investigation showed that *Caesalpinia sappan* *Saraca indica* contains carbohydrates, alkaloids, flavanoids, cardiac glycosides, steroids and tannins as given in Tables.

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