MS.ID-IJPBS-0012
International Journal of Pharmacy and Biological Sciences-IJPBS™ (2024) 14 (2): 16-18
Online ISSN: 2230-7605, Print ISSN: 2321-3272
Research Article | Pharmaceutical Sciences | OA Journal | MCI Approved | Index Copernicus

Preliminary Phytochemical Screening of *Hibiscus Rosa Sinensis*

G Seetha Sri, Malik Dewan, Mirjul Momin Najrul Islam, N Koushik, N Deepa Ramani, and Averineni Ravi Kumar*

Department of Pharmacognosy, Nimra College of Pharmacy, Vijayawada-521 456, Andhra Pradesh, India.

Received: 12 Jan 2024 / Accepted: 6 March 2024/ Published online: 01 April 2024
***Corresponding Author Email:** karavi315@gmail.com

Abstract

In the present study, an attempt was made to investigate Phytochemical evaluation of different parts of Hibiscus rosa-sinensis. The crude drug powder extracts of the leaves of the above plants were taken for the study. Phytochemical Screening was done for the selected plants.

Keywords

Phytochemical screening, Hibiscus Rosa-sinensis

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INTRODUCTION

Herbal medicine, also known as botanical medicine or phytomedicine-refers to using plants seeds, flowers, roots for medicinal purposes. Herbalism has a long tradition of use of outside of conventional medicine. It is becoming more mainstream as improvements in analysis and quality control along with advances in clinical research show the value of herbal medicine in 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 Hibiscus rosa-sinensis were authenticated by Mrs. N Deepa Ramani Associate Professor Nimra College of Pharmacy They were collected from different areas of NTR district of Andhra Pradesh.

A twig of Hibiscus rosa- sinensis

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 extract, 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 extract, 10 ml of diluted 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 extract, 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 extract, 1 ml of pyridine, 1 ml of Sodium nitro prusside solution were added and observed.
KELLER-KILIANI TEST	To 50 mg of each extract, 2 ml of glacial acetic acid, 1 ml FeCl3 solution was 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 extract, lead acetate (5 ml) was added and observed.

TEST FOR TANNINS

To 100 mg of each extract, 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.

TEST FOR STEROIDS

TEST	PROCEDURE
SALKOWSKI TEST	To 100 mg of each extract, 2 ml of $CHCl_3$, 2 ml of conc. H_2SO_4were added, mixed thoroughly and both the layers were observed for color.

Phytochemical Evaluation of Hibiscus rosa- sinensis

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	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 Hibiscus rosa-sinensis. The investigation showed that Hibiscus rosa-sinensis contains carbohydrates, alkaloids, flavonoids, cardiac glycosides steroids and tannins as given in Tables.

ACKNOWLEDGEMENTS

The Authors are Thankful to HOD of Department of Pharmacognosy Nimra College of Pharmacy for helpful suggestions in B. Pharmacy Project Work.

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