

## Comparative Phytochemical Screening Of Leaves Of *Peltophorum Pterocarpum* And *Tephrosia Purpurea*

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### Abstract:

*Flower of peltophorum pterocarpum and Tephrosia purpurea ,have been used for several purposes such as medicine, food and garnishing . The present study investigated on phytochemical analysis of leaves of Peltophorum pterocarpum and Tephrosia purpurea was carried out. Peltophorum p.and Tephrosia p. is belongs to family Fabaceae and has been widely used for therapeutic applications of the many diseases. The phytochemical study of various extracts of leaves of Peltophorum pterocarpum and Tephrosia purpurea revels the presence or absence of phytochemical components such as Tannin, Saponin, Flavonoid, Phenol, Alkaloid was carried out.*

*Keywords: Phytochemical analysis, Tannin, Saponin, Flavonoid, Phenol, Alkaloid*

### Introduction :

World Health Organization had reported that nearly 65-80% of world's population in developing countries depends on the traditional medicine for their primary health care and treatment of various diseases. Herbal medicine is the oldest form of health care. Many drugs commonly used today are of herbal origin. Medicinal plants are rich so of novel drugs that forms the ingredients in traditional system, modern medicines, pharmaceutical intermediates and lead compounds in synthetic drugs {4}. Many plants are a good source of herbal medicine and natural products for many therapeutic application. The bioactive natural sources which are extracted from medicinal plants which shows many used and no side effects. In addition to therapeutic applications of medicinal plants, they are also a great source of chemical constituents which could be act as newer leads and guide for modern drug design and development [8]. Different parts of this tree are used to treat many diseases like stomatitis, insomnia, skin diseases, constipation, ringworm and its flower extract is known to be a good sleep inducer and used in insomnia treatment [1-6]. In recent times focus on plant research has increased all over the world and a large body of evidence has collected to show immense potential of medicinal plants used in various traditional systems [7] including treatment against hepatocellular carcinoma [3]. In addition to therapeutic applications of medicinal plants, they are also a great source of chemical constituents which could be act as newer leads and guide for modern drug design and development.[6] The plants consist of very important class of phytoconstituents such as alkaloids, flavonoids, steroids, glycosides, terpenes, tannins and phenolic compounds, which were used treatment of various diseases.[2] It is well known that there is a strong correlation between the phytoconstituents and their bioactivity towards the diseases is potential tool for the design and synthesis of new bioactive compounds with specific activities for treatment of various diseases.[5] Therefore, it is highly desirable to investigate preliminary phytochemical screening of plants in order to discover and develop novel bioactive therapeutic drugs with improved efficacy.

### Material and Methods

#### Collection and extraction of medicinal plants

The sample of these two plants was studied and was collected from Akola in month of November 2018. The leaves of plants were dried in normal temperature and were made coarse power. The powder was extracted with 600 ml of methanol using soxhlet apparatus till exhaustion for about 48 h. The methanol extract was concentrated under vacuum at 40 °C to get the residues

Phytochemicals	<i>Peltophorum pterocarpum</i>	<i>Tephrosia purpurea</i>
Alkanoids	+	+
Flavonoids	+	+
Phenols	+	+
Saponin	-	+
Steroids	+	+
Tannins	+	+

### **Preliminary Phytochemical Analysis**

#### **Test for Alkaloid**

To 1mL of flower extract, 1mL of conc. Sulphuric acid was added. To that 1mL of Mayer's reagent is added. The formation of green or white precipitate was regarded as positive for the presence of alkaloids

#### **Test for Flavonoid**

To 1mL of 2N NaOH was added to 1mL of flower extract. Appearance of yellow colour indicates the presence of flavonoid

#### **Test for Phenol**

To 1mL of leaf extract, 1mL of sodium carbonate was added. To that 1mL of Folin was added. Formation of blue or green colour indicates the presence of Phenols

#### **Test for Saponin**

To 1 mL of flower extract was added to 2mL of distilled water in a test tube. The solution was shaken for 15 minutes observed for stable persistent foam of about 0.5 to 1 cm layer indicates the presence of saponin

#### **Test for Steroids**

To 1mL of flower extract was added to 1mL of chloroform and 1.5mL of conc. sulphuric acid. The appearance, at the interphase, a reddish brown colour showed a positive reaction

#### **Test for Tannin**

1 mL of flower extract was taken in a test tube. To that 1mL of 5% ferric chloride was added. Formation of greenish black colour indicates the presence of tannin

### **Results and Discussions**

The phytochemical investigation of all extracts of leaves of *Peltophorum pterocarpum* reveals presence of Alkanoids, Flavonoids, Phenols, Steroids and Saponins was absent. *Tephrosia purpurea* presence of Alkanoids, Flavonoids, Phenols, Steroids and Saponins

### **Conclusion**

The preliminary phytochemical investigation of all extracts of leaves of *Peltophorum pterocarpum* and *Tephrosia purpurea*. Selected ten medicinal plants are the source of the secondary metabolites i.e. Alkanoids, Flavonoids, Phenols, Steroids and Saponin. Medicinal plants play a vital role in preventing various diseases. The antidiuretic, anti-inflammatory, antianalgesic, anticancer, anti-viral, anti-malarial, anti-bacterial and antifungal activities of the medicinal plants are due to the presence of the above mentioned secondary metabolites. Medicinal plants are used for discovering and screening of the phytochemical constituents which are very helpful for the manufacturing of new drugs. The previous phytochemical analysis and present studied show nearly the similar results due to the presence of the phytochemical constituents. The phytochemical analysis of the medicinal plants are also important and have commercial interest in both research institutes and pharmaceuticals companies for the manufacturing of the new drugs for treatment of various diseases. In this connection, the authors investigated the stated parameters. This is an attempt to establish the scientific basis for identifying crude drugs

### **Acknowledgements**

We are grateful to Shri R.L.T. College of Science, Akola for help in my research activity.

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