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CHEMICAL CHARACTERIZATIONS OF MEDICINALLY IMPORTANT BURSERACEOUS PLANT BOSWELLIA SERRATA

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ABSTRACT

The plant *Boswellia Serrata* is widely distributed in the central India especially in Panchmadi region of MP. It has very potential value due to its medicinal properties. Based on preliminary reports there is a lot of scope in the roots of this plant for treating various disorder. The purpose of work is to study medicinally active substances present in ethanol extract, Aqueous extract and Benzene extract obtained from roots powder of *Boswellia Serrata*. Preliminary Phytochemical screening of the extracts revealed the presence of Alkoids, Carbohydrates, Phenolic Compounds, Tannins, Saponins, Steroids and Flavonoids.

Key words: *Boswellia Serrata*, Chemical Characterization, Medicinally active substances.

I. INTRODUCTION

Boswellia Serrata is a plant. The plant is belonging to family Burseraceae. The roots of plant are adjuvant roots are aggrieved vomit purgative cathartic and powerful brain tonic. They are rumored to be useful for treatment of joint pain, palsy etc.

In addition the oil from the roots is stomachic used in lives and disease of the skin. The drug is becoming more popular in the modern world for their application to cure variety of diseases with less toxic effects and better therapeutic effect.

II. MATERIAL REQUIRED

The roots *Boswellia Serrata* were collected in mature stage in the month January and February from Panchmadi (M.P.), India. The collected roots were washed with water to remove soil and other extraneous matter. Roots were taken and cut into small pieces and dried under shade for 25 days. Then dried roots were homogenized to coarse powder was collected and used for the experiment and preparation of extract.

Preparation of Crude Oil Extracts:

In a soxhelt apparatus the root powder was macerated repeatedly with 98% of ethanol and under reduced pressure at 45-55°C the combined filtrate was evaporated to dryness. The resulting crude ethanol extract was stored at 15-20°C

Aqueous Extract:

For 1 week 60 g of *Boswellia Serrata* root powder was immersed in aqueous solution in 270 ml flat bottom flask and was cold extracted with shaking and warming occasionally. The clear filtrate was obtained at the end of the seventh day. By vacuum distillation the filtrate was further converted and cooled, then was transferred into a Petri dish to be dries in an oven at the temperature of 50-60°C for 10 minutes.

Qualitative Phytochemical and analysis:

The alcoholic, aqueous and benzene extracts of *Boswellia Serrata* were subjected to different chemical tests for the detection of phytoconstituents such as Sterols, Saponins, Alkaloid, Tannins, carbohydrates, Flavonoids, Lactones, Amino acid, proteins, Resins and starch. Chemical and physical investigation of methanolic extract of roots of *Boswellia Serrata* was carried out. By Phytochemical screening the presence of alkaloid, triterpenoid, phenols, tannins, Flavonoids, carbohydrates, phytosterols, fats and fixed oil were confirmed.

- Qualitative Phytochemical analysis of the methanolic extract was carried out using procedures to identify.
- Carbohydrates (Molisch test)
- Reducing sugars (Fehling's test, Benedict test)
- Protein (Biuret test, millon's test)
- Amino Acid (Ninhydrin test, Ferric Chloride test)
- Alkaloids (Mayer's test)
- Cardiac glycosides (Keller- Kiliani test)
- Saponins (foam test)
- Flavonoids (Lead acetate test)
- Tannins (Potassium dichromate test)
- Phenols (Ferric chloride test)

III. RESULT AND DISCUSSION

The use of plant *Boswellia Serrata* root extract with known antimicrobial can be great significance in therapeutic treatments but several studies have also reported various type of contamination of herbal medicines which include microorganism and toxins produced by microorganisms, pesticides and toxic heavy metals. As a result, sterilization is needed especially for aqueous extract before used to extract rid of these contaminations. In present study aqueous were autoclave-sterilized before use as autoclaving is reported to cause less damage to the antibacterial activities of the aqueous extract.

IV. CONCLUSION

For identification and authentication of a drug the standardization of crude drug has become very important now days. But the importance was not up to the mark due to certain types of problems. And so, to identify the drug from it's originally fails due to the lack of standardization technique, which thereby experts the usage of drug from its traditional system of medicines.

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