

PODOPHYLLUM

Synonyms

Podophyllum, American Mandrake, May-apple root.

Biological Source

Podophyllum consists of the dried rhizomes and roots of *Podophyllum peltatum* Linn., belonging to family Berberidaceae.

Chemical Constituents

Podophyllum rhizomes contain 2–8% resinous material termed as podophyllin. The major constituents of podophyllum resin are the lignan derivatives which are characterized as podophyllotoxin, α - and β -peltatin. The lignans are found in the form of glycosides and also as their free aglycones. It also contains desmethyl podophyllotoxin, desoxypodophyllotoxin, podophyllotoxone, a flavonoid quercetin and starch.

Uses

Podophyllum resin or podophyllin shows cytotoxic activity. It is used for the treatment of venereal and other warts. Podophyllotoxin is semisynthetically converted to a potent anticancer agent etoposide which is mainly used for the treatment of lung and testicular cancer. Podophyllum resin is a strong gastrointestinal irritant. It acts as a drastic purgative in moderate doses but it has been mostly replaced by other purgative drugs.

PTEROCARPUS

Synonyms

Bijasal, Indian kino tree, Malbar kino.

Biological Source

It consists of dried juice obtained by making vertical incisions to the stem bark of the plant *Pterocarpus marsupium* Linn., belonging to family Leguminosae.

Chemical Constituents

Kino contains about 70–80% of kinotannic acid, kino-red, k-pyrocatechin (catechol), resin and gallic acid. Kinotannic acid is glucosidal tannin, whereas kino-red is anhydride of kinoin. Kinoin is an insoluble phlobaphene and is produced by the action of oxydase enzyme. It is darker in colour than kinotannic acid.

Chemical Tests

1. When the solution of drug is treated with ferrous sulphate, green colour is produced.
2. With alkali (like potassium hydroxide) violet colour is produced.
3. With mineral acid, a precipitate is obtained.

Uses

Kino is used as powerful astringent and also in the treatment of diarrhoea and dysentery, passive haemorrhage, toothache, and in diabetes. It is used in dyeing, tanning, and printing. The aqueous infusion of the wood is considered to be of much use in diabetes. The alcoholic, as well as, aqueous extracts of heartwood are known to possess hypoglycaemic action. The cups made of wood are available with Khadi and Gramodyog commission for treatment of diabetes.

Marketed Products

It is the one of the components of the preparation known as Gludibit (Lupin Herbal Laboratory) and Diabecon (Hima-laya Drug Company) for diabetes mellitus.