

PALE CATECHU

Synonyms

Gambier, pale catechu, catechu.

Biological Source

Gambier or pale catechu is a dried aqueous extract produced from the leaves and young twigs of *Uncaria gambier* Roxburgh., belonging to family Rubiaceae.

Chemical Constituents

Pale catechu contain from about 7 to 30% of pseudotannin catechin and 22 to 55% of a phlobatannin catechutannic acid. Both of the about component constitute over 60% of the drug. It also contains catechu red, gambier fluorescin and quercetin. It contains indole alkaloid up to 0.05%, which includes gambirtannin and its derivatives. Gambirtannin gives a strong fluorescence under UV light. Catechin forms white, needle like crystals, which dissolves in alcohol and hot water. Catechutannic acid gives green colour with ferric chloride.

Chemical Tests

- 1. Gambier fluorescin test:** Gambier fluorescin present in pale catechu gives the fluorescence. If to its alcohol extract, a little sodium hydroxide is added and shaken with petroleum ether. The petroleum ether layer shows green fluorescence. Black catechu gives negative test.
- 2. Vanillin-hydrochloric acid test:** Drug shows pink or red colour with a mixture of vanillin:alcohol:dilute HCl in the ratio 1:10:10. The reaction produces phloroglucinol which along with vanillin gives pink or red colour.
- 3.** A matchstick dipped in decoction of Pale catechu is air dried and again dipped into concentrated HCl and warmed near the burner. Pink or purple colour is produced.
- 4.** Small quantity of powder is heated on water bath with 5 ml chloroform and filtered. The filtrate is evaporated in white porcelain dish on a water bath. A greenish-yellow residue is

produced due to the presence of chlorophyll in the drug. Black catechu gives this test negative due to the absence of chlorophyll.

Uses

Pale catechu is medicinally used as local astringent. In diarrhoea, it is used as general astringent. It is largely used in various countries of east for chewing with betel leaf. Large proportion of gambier is used in dyeing and tanning industries. It is used for tanning of animal hides to convert it to leather.