

COCA LEAVES

Synonyms

Coca, Cuca, Cocaine, Folium cocae, Peruvian coca, Truxillo coca, Java coca, Bolivian coca.

Biological Source

Coca consists of the dried leaves of various species of *Eryth-mxylon*, that is, *Erythroxyton coca* Lam (Huanco or Bolivian coca) or *Erythroxyton coca* var. *Spruceanum* (Peruvian, Truxillo or Java coca) also known as *Erythroxyton truxillense* Rusby., belonging to family Erythroxytonaceae.

Chemical Constituents

Coca leaves contain the alkaloids Cocaine, Annamyl Cocaine, and Truxilline or Cocamine. Truxillo or Peruvian leaves contain more alkaloid than the Bolivian, though the latter are preferred for medicinal purposes. Java Coca contains tropacocaine and four yellow crystalline glucosides in addition to the other constituents.

Uses

The actions of Coca depend principally on the alkaloid Cocaine. Cocaine has stimulant action on CNS. The leaves are extensively chewed to relieve hunger and fatigue. Coca alkaloids cause also hallucination. Coca leaves are used as a cerebral and muscle stimulant, especially during convalescence, to relieve nausea, vomiting and pains of the stomach without upsetting the digestion. Cocaine also has local anesthetic action on skin and mucous membrane; and is used as dental anaesthesia and minor local surgery of ophthalmic, ear, nose and throat. Chemical structure of cocaine has lead to several synthetic anaesthetics like anaesthesia, novocain, stovain, etc.

RAUWOLFIA

Synonyms

Sarpagandha, Chandrika; Chootachand; Indian snake root.

Biological Source

Rauwolfia consists of dried roots of *Rauwolfia serpentina* Benth., belonging to family Apocynaceae.

Chemical Constituents

Rauwolfia contains about 0.7–2.4% total alkaloidal bases from which more than 80 alkaloids have been isolated. The prominent alkaloids isolated from the drug are reserpine, rescinnamine, ψ -reserpine, rescidine, raubescine and deserpidine. The other alkaloidal components are ajmalinine, ajmaline, ajmalicine (8-yohimbine), serpentine, serpentinine, tetrahydroreserpine, raubasine, reserpinine, isoajamaline and yohambinine.

Uses

Rauwolfia is used as hypnotic, sedative and antihypertensive. It is specific for insanity, reduces blood pressure and cures pain due to affections of the bowels. It is given in labours to increase uterine contractions and in certain neuropsychiatric disorders. Ajmaline, which has pharmacological properties similar to those of quinidine, is marketed in Japan for the treatment of cardiac arrhythmias.

Reserpine is a white or pale buff to slightly yellow, odourless, crystalline powder that darkens slowly when exposed to light and rapidly when in solution. Reserpine is an antihypertensive and tranquilizer. Rescinnamine is the methyl reserpate ester of 3,4,5-trimethoxy cinnamic acid. The usual antihypertensive dose of rescinnamine is 500 μg , two times a day. Higher doses may cause serious mental depression. Deserpidine is 11-des-methoxyreserpine. It is a wide-range tranquilizer and antihypertensive and is free from the side effects.

Marketed Products

It is one of the ingredients of the preparations known as Confido, Lukol, Serpina (Himalaya Drug Company) and Sarpagandhan bati (Baidyanath).