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The Review on Insulin Plant: A Plant of Ayurvedic used (Costus Igneus Plant)

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ABSTRACT

Costus Igneus (insulin plant) traditionally used medicinal herb which is native to southeastAsia. The plant has been recently introduced into india and it is grow as ornamental plant in south India. India insulin plant contain various phytochemicals constituent llike steroid, alkaloid , flovonoid,Triepene, glycoside and saponins. Its leaves are been used as dietary supplement in treatment of diabetes mellitus. The catchphrase of the plant is: a leaf a day keeps diabetes away" various pharmacological activities include anti diabetic effect, antiproliferative potential, antimicrobial activityAntiurolithiatic property anti-inflammatory potential it effect on learning and memory ,antioxidant activity neuroprotective role hypolipidemic activity etc. The present review article attempt explore various medicinal properties of costus igneus (insulin plant)for research purpose and its suitable formation development in feature for the welfare of mankind.

Keywords: costus igneus, pioglitazone, insulin plant,phytoconstituents, Ayurvedic use, pharmacological activities marketed products.

INTRODUCTION

Costus belong to family costaceae, commonly known as insulin plant in india because its, leaves to builds up insulin in the human body since oral hypoglycaemic agents prossess various side effect. There is grow in demand for herbal remedies for the treatment of diabetes mellitus. many plant preparation as used in folklore and traditional system of diabetes mellitus. Investigation on new oral hypogycaemic compound from medicinal plant will set a mild stone for development of pharmaceutical entities or as a dietary aduvant to existing therapies in the future.insulin plant is one such traditional plant which is getting global acceptance now days and is now widely used as an ayurvedic medicine herh Cosumption of leaves are believed to low blood glucose level, and diabetes who consume the leaves of this plant said to have a fall in their blood glucose levels and diabetics who consumed the leaves of this plant said to have a fall in their blood glucose levels insulin plant is native to southeast asia, especially on the Greater sunda islands in Indonesia. It is relatively a new entrant to india and is being grown as an ornamental plant in kerala in the Ayurvedic system of medicine ,diabetes is traditionally treated by chewing the plant leaves for a period of one month to get a controlledblood glucose level.

CostusIgneus (insulin plant)

Cultivation and propagation:in siddha medicine , it is known as kostum. It is being cultivated in Kashmir and the Himalayan region for its root , it is related to the gingers and was originaly part of the family Zingiberaceae . But now the costus species and their kin have been reclassified into their own family, Costaceae.the species reproduces vegetative by rhizome and birds disperse seeds when they feed on the fruits. Costus products are sometimes called Costus igneus and are edible in nature. The flower petals are quite sweet and nutritious. It's a lower grower and makes a great ground cover.The long red flower spikes of Costus pulverulent us are unique to the family and they are sure to create interest in the garden. The plant grows very quickly. And the propagation is by stem cutting. It needs sunshine but it also grows in slightly shady areas. It is cultivated in india for its use in traditional medicine and elsewhere as an ornamental.

Morphology:it is an upright, perennial shrub and is about two feet tall. Long branches are falling over the ground. Leaves are simple, alternate , oblong , twenty-five cm in length with several parallel thick veins. Soft, cylindrical, fleshy , pale brown rhizome is present. Strong tap root is also present which is wider is wider at the top , sub-cylindrical in shape with light brown to pale , dark brown colour, At the top of the branches , orange flowers are present. Fruits are very small, green in colour.

Growth and Propagation:it grows under full sun or partial shade. It needs fertile soil with heavy moisture and is often planted near water. Propagation occurs by the division of the clumps, cuttings , or by separating the offsets that form below the flower heads. It is cultivated in the coastal area, Uttar Kannada district of Karnataka and Tamil Nadu.

Bio-Active Compound (Anti-Diabetic): Costus igneus contain various phytochemical like flavonoids, alkaloids , terpenoids and it was traditionally used in india to control diabetes and in experimental diabetic rats. Chemical Such bio-componenta are present in various plant parts like in leaves , steam , rhizomes, etc.

In Leaves :carbohydrates, tritepenoids, proteins, alkaloids, tannins, saponins, and flovonoids.etc .are present in leaves. Besides these, steroids and carbohydrate like roseoside, fatty acids like hexadecanoic acid,9,12–octadecanoic acid, tetradecanoic acid, ethyl oleate, oleic acid, squalene are also present in leaves.

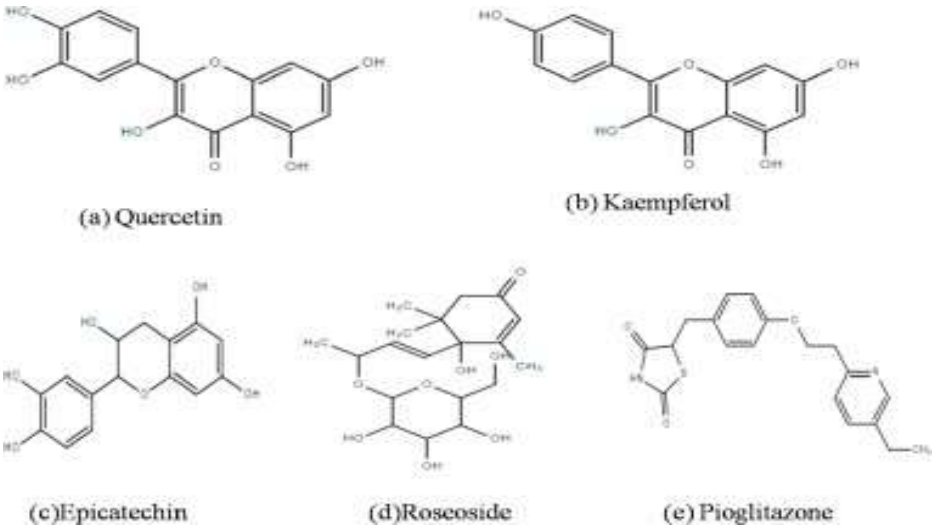
In Stem: Terpenoid compound lupeol and steroid compound stigmasterol are present in the stem.

In Rhizome: Quercetin, diosgenin , a steroidal sapogenin etc . are available in rhizome.

In Root: Terpenoid ,alkaloids, Tannins , etc. areavailable in the root portion.

Identification of plant

Chemical structure :



Drug profile **:**quarcetin 117-39-5/ meletin.

Category : antioxidant, hypoglycaemic.

Monoisotopic mass : 302.0426565 g/ mol.

Molecular Formula **:** C15 H10O7

IUPAC Name:2-(3,4-dihydrophenyl)-3,5,7-trihydroxychromen-4-one

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