

# *Plumbago indica* Linn.

**Synonyms** : *Plumbago rosea* Linn.

**Family** : Plumbaginaceae

**Group** : Anti-arthritic/anti-rheumatic/anti-inflammatory

**Parts Used** : Root

## **Vernacular Names**

English : Red flowered leadwort

Malayalam : Chettikoduveli

Hindi : Lalcitra, Raktacitra

Kannada : Kempucitramala

Tamil : Cittramulam

Telugu : Yerracitramulam.



**Distribution and Habitat:** Native of Coromandel Coast. Found throughout India, in moist situations as well as cultivated.

**Botany:** A pretty subscandent perennial shrub with semi-woody striate stems and flexible branches.

• **Leaves:** Simple, alternate oblong, short cuneate at the base passing into a very short amplexicaul, exauriculate and reddish petiole.

• **Flowers** : Bright red, arranged in long terminal spikes. The calyx ribs are covered with stipitate, bifarious and sessile gland. Corolla tube is slender and four times as long as the calyx.

• **Roots** : The stout roots are cylindrical, irregularly bent, light yellowish brown with smooth surface having short transverse shallow fissures at the regions of the bents. A light yellowish juice exudes from the cut surface. A healthy plant may produce 18-20 stout roots.

**Chemical constituents:** The chemical constituents include plumbagin and sitosterol glucoside. Clinical trials have demonstrated that plumbagin oil from *P. indica* is useful in common wart.

## **Properties & Uses:**

• The roots are acrid, astringent, thermogenic, anthelmintic, constipating, expectorant, anti-inflammatory, abortifacient, alterant, anti-periodic, carminative, digestive, sudorific, narcotic, gastric, nervous stimulant and rejuvenating.

• Root is a powerful sialogogue and vesicant.

• Esteemed remedy for leucoderma and other skin diseases.

• Burning action of the root cause blisters on the skin .

• The roots are useful in dyspepsia, colic, inflammations, cough, bronchitis, helmenthiasis, haemorrhoids, elephantiasis, chronic and intermittent fever, leprosy, leucoderma, ringworm, scabies, hepatosplenomegaly, amenorrhoea, odontalgia, vitiated conditions of *vata*, *kapha* and anaemia.

**Formulations:** *Citrakasavam*, *Thaleesapathradi churnam*, *Dasamularista*, *Gulgulutiktaka kasaya*, *Yogarajachurna*, etc.

## **Agrotechnology**

**Propagation:** By single, double or three noded semi hardwood stem cuttings. Cuttings are planted in nursery beds for rooting.

**Planting:** Plough two or three times the land and make ridges of 30cm height and 50 cm apart. 2-3 month old rooted cuttings are planted on teh ridges at 15 cm apart in June- July.

**Varieties:** Mridula(low plumbagin content), Agni (high plumbagin content)and KAU Swathi(moderate plumbagin content)

**Manuring:** Cattle manure/compost @ 10t/ha as basal dose. Fertilizer recommendation is 50:50:50 kg/ha N: P:K. N and K are applied as two splits at 2 and 4 months after planting.

**Harvesting:** At the end of 18 months, tubers are harvested when it contains maximum content of plumbagin. Care should be taken to wear gloves; else the phenols present in the roots will cause burning sensation. The collected tubers are washed, tied into bundles and marketed. Plumbago yields about 7-10 tons tubers/ha with good management.

