

DIGITALIS



Biological source:

Digitalis consists of dried leaves of *Digitalis purpurea*

Family:

Scrophulariaceae

Geographical source:

It is found in European countries, England, North America and India. In India, it is cultivated in Kashmir and Nilgiri Hill.



CULTIVATION & COLLECTION:

- Biennial herb, 1-2 m in height
- Propagated by seeds of selected strains containing high glycosidal content
- Requires calcareous, acidic, sandy light soil with traces of manganese for growth
- Altitude 1600 to 3000 m
- Seeds are very small in size i.e. 100 seeds weigh 40 to 70 mg
- Seeds are mixed with fine sand and sown in nursery beds in March / April (2.5 kg / hector)
- Young seedlings are then transplanted into fields in sept / november



- Crop is manured and kept free from weeds
- Leaves are picked up by hands
- Plant flowers in April followed by fruiting
- In the first year plant bears rosette leaves and in second year sessile leaves.



- Leaves are picked up in afternoon when 2/3rd of the flowers are fully developed
- Basal leaves and leaves at the top are collected at end



- Discolored leaves are rejected
- While collecting the leaves dry weather is selected

Preparation for the market:

- After plucking leaves are immediately dried at temperature below 60°C / vacuum drying
- Dried leaves are packed into air-tight containers containing suitable dehydrating agent



Organoleptic characters:

Color: Dark greyish green

Odour: slight

Taste :Bitter

Size: 10 to 40 cm long, 4 – 20 cm wide

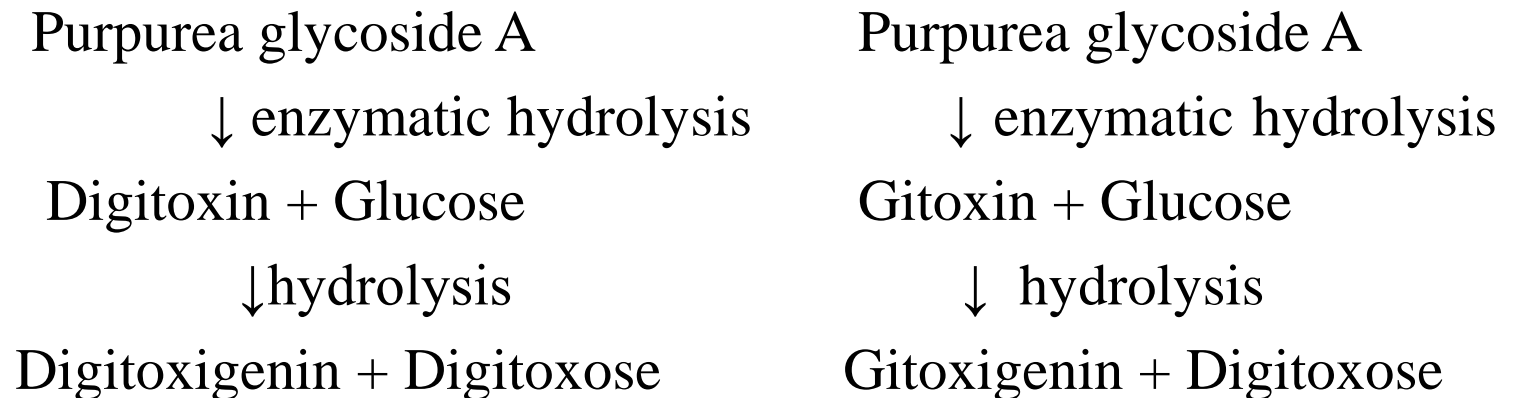
Shape: Ovate, lanceolate to broadly ovate,
with irregularly crenate or serrate or occasionally dentate margin



Chemical constituents:

- Digitalis contains 0.2 to 0.45 % of Cardiac glycosides (Cardenolides), **Purpurea glycosides A and B**, which are primary glycosides.
- Digitalis also contains several other glycosides such as Odoroxide H, Glucogitaloxin, Gitaloximn, Verodoxin and Glucoverodoxin.

The products of hydrolysis of purpurea glycoside A and purpurea glycoside B, the chief active constituents of the drug are as under



Chemical tests:

- Keller Killiani
- Baljet test
- Legal Test

Uses

- Digitalis increases excitability of Cardiac muscles and produces more powerful contractions.
- It is effective in Congestive cardiac failure to increase cardiac output and to relieve venous congestion.

Hence it is described as a Cardiotonic.

- The improvement of circulation through kidney results in diuresis and loss of Oedema.
- The major disadvantage of Digitalis is that it has cumulative effect and therefore, in prolonged treatment one has to watch the patient carefully.

Substitutes and Adultrants:

- *Verbascum thapsus*
- *Primula vulgaris*
- *Symphytum officinale*

Allied drugs:

- *Digitalis lanata*
- *Digitalis lutea*
- *Digitalis thapsi*