

# Cascara Sagrada: Uses, Botanical Source, Characters, and Chemical Constituents

By pharmacognosy

## Synonyms

Cascara Bark, Sacred Bark, Chittem Bark

## Botanical source

Cascara Sagrada consists of the dried bark of *Rhamnus purshiana* D.C The collected bark is stored for one to four years before It is used for medicinal purposes. The plant is a shrub or small tree of the family Rhamnaceae.

## Cascara Sagrada Geographical Source

*Rhamnus purshiana* is cultivated in British Columbia, Oregon, California and Kenya.

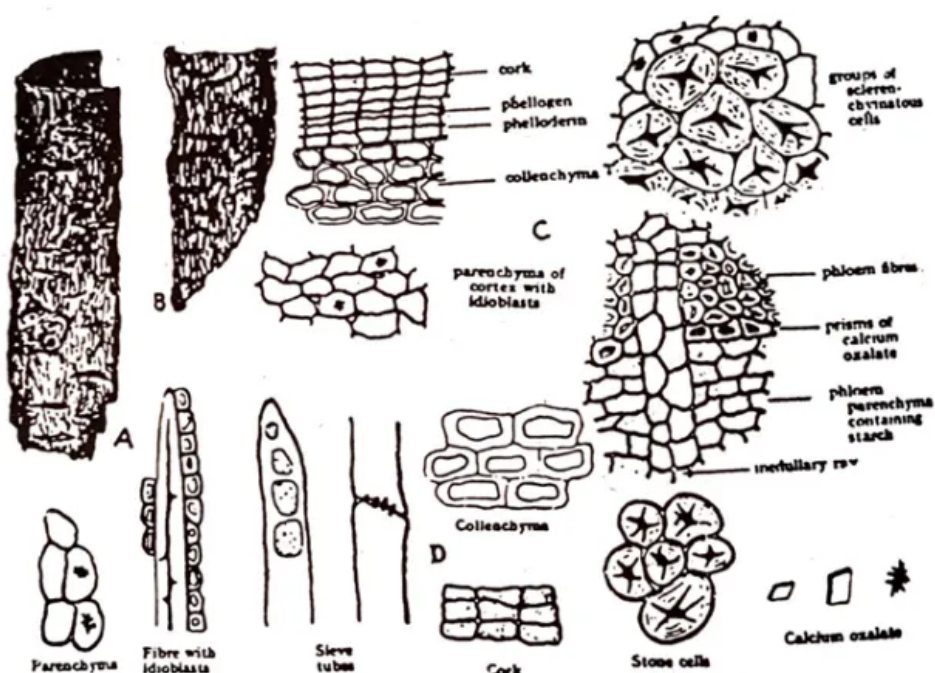


Fig. 51: Cascara Sagrada. A, the bark, showing outer surface; B, a piece of bark, showing inner surface; C, cellular structures in t.s.; D, cellular elements and calcium oxalate crystals in powders. (Reconstructed from Herbert & Ellery).

## Macroscopical Characters

The bark occurs in single quills or channelled or flat pieces, 5 to 20 cm in length, up to 2 cm width and 1 to 3 mm in almost smooth cork with pale brown. transversely elongated lenticels, occasional patches of silver gray lichens and mussel scale insects. Inner surface has longitudinal striations and faint transverse corrugations. Fracture is short and granular

to the outer side but somewhat fibrous to the inner side. Odour is faint but characteristic, taste bitter and nauseous.



## Microscopical Characters

Cork consists of several rows of small, flattened, polygonal cells with reddish brown contents. The outer cells of cortex are collenchymatous and the inner ones rounded, which contain minute starch grains. Numerous idioblasts contain rosettes of calcium oxalate. Stone cells occur in oval or rounded yellow coloured groups and are thick walled, striated and pitted. Slender phloem fibres occur in narrow, elongated tangential groups and are associated with sheaths of idioblasts containing prisms of calcium oxalate. Sieve tubes occur in groups and are not accompanied by companion cells.

## Chemical constituents

Cascara Sagrada contains 6 to 9 per cent of anthraquinone glycosides, which include cascarosides A, B, C and D, emodine, barbaloin and other similar anthraquinone glycosides. It also contains dextrose and an enzyme.



## Uses of Cascara Sagrada

Cascara Sagrada is a cathartic drug. It is used in the treatment of constipation, particularly for correction of habitual constipation.

## Substitutes and adulterants

The dried bark of *Rhamnus frangula* Linn. is a common substitute. Barks of other species of *Rhamnus* are used as adulterants.