



SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

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CHINCHONA



Name: Cinchona Bark,

Origin: the dried stem and root barks of:

Cinchona succirubra known as red
Cinchona,

C ledgeriana *C Calisaya* known as yellow
Cinchona,

C. officinalis known as pale Cinchona

Family Rubiaceae

Condition: dry, broken

Shape: Quill, double quill, curved

Size:

Color: Brown to reddish brown

Outer surface: Gray or grayish brown to reddish brown, bearing grayish white lichens with longitudinal ridges and longitudinal and transverse fissures and it have exfoliated areas.

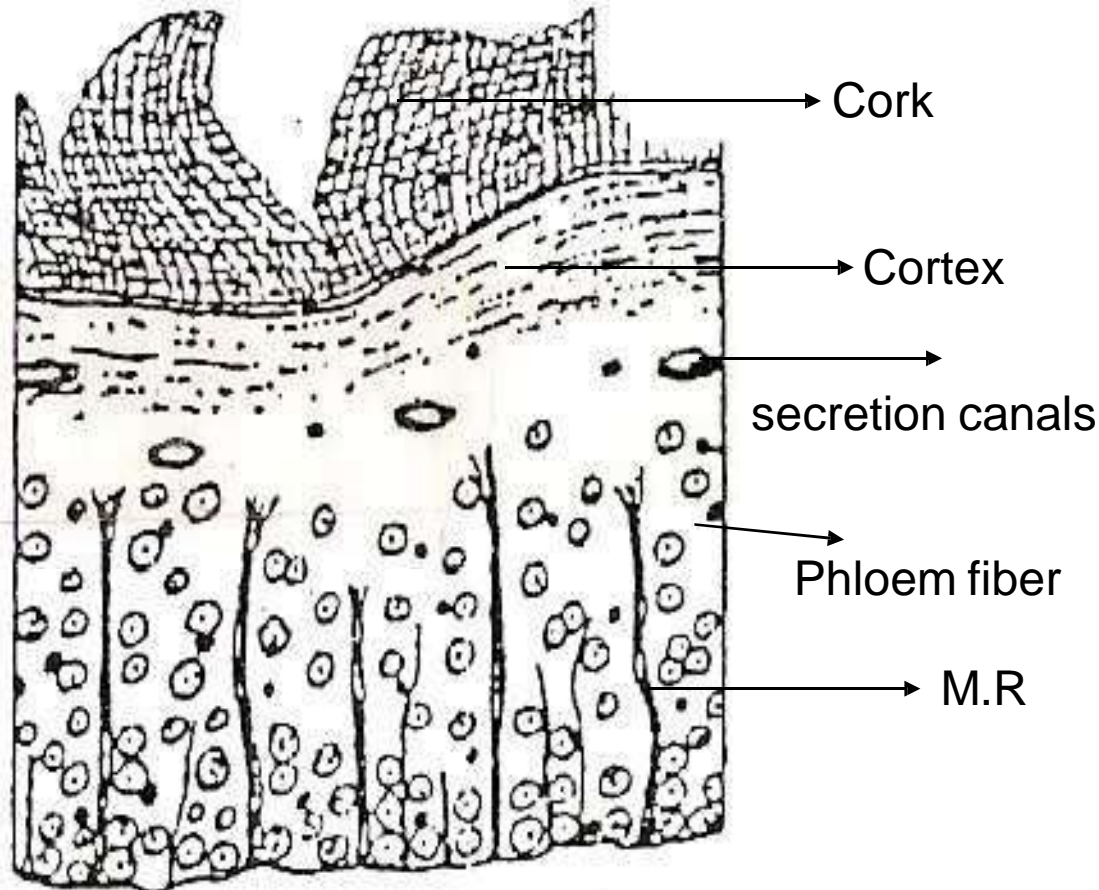
Inner surface: Pale yellowish brown to brown, longitudinally striated

Fracture: Short in outer part, fibrous in inner part

Odor: Faint characteristic odor

Taste: Bitter astringent

T.S. in Cinchona bark



1. Cork: 5-8 layers of thin walled flattened cells with reddish brown content (cinchotannic acid).

2. Cortex: Thin wall parenchyma cell contain rounded starch granules, micro prisms of calcium oxalate, secretion canals (laticiferous cells) which secretes latex and tannins appear oval in T.S.

3. Phloem: Characterized by phloem fibers.

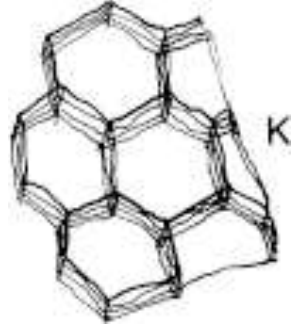
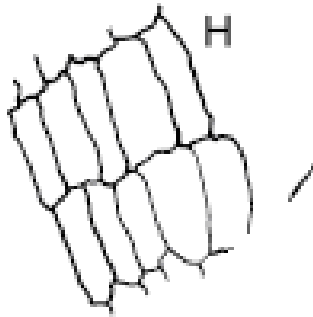
- **Description of fiber:** Fusiform lignified fiber having striated walls and funnel shaped pits.

- **Phloem parenchyma:** Thin walled parenchyma with scattered calcium oxalate prisms.



T.S. [Cinchona Bark]

Powder of Cinchona



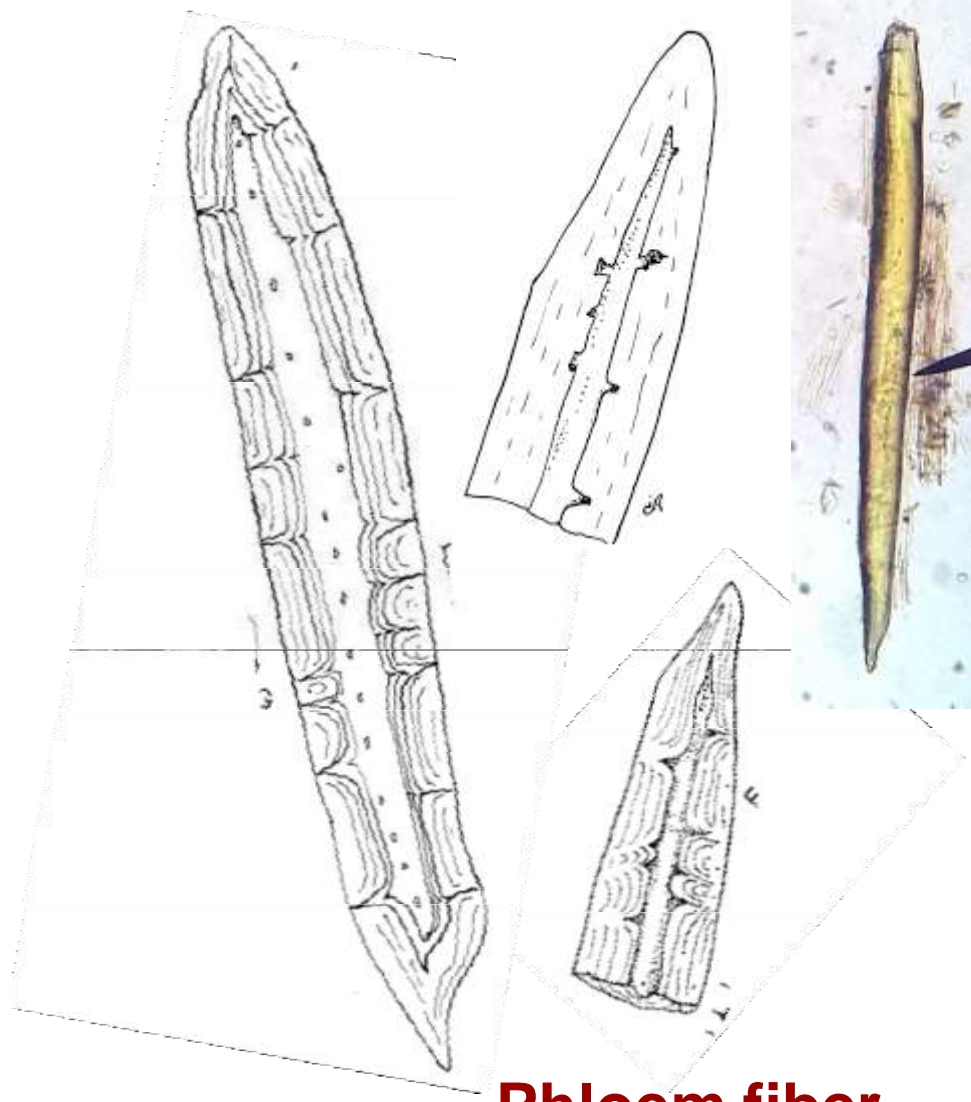
Fragments of cork cells

Idioblast

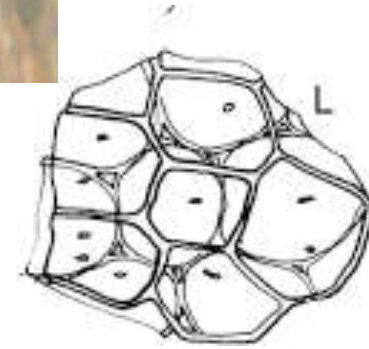
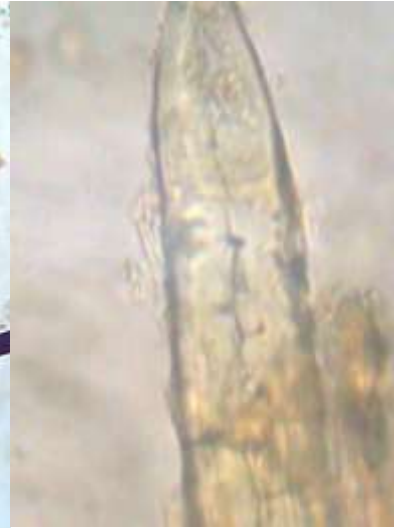
(microprisms of ca oxalate)



starch



Phloem fiber



**Phloem parenchyma
+ medullary rays**

- **Description of fiber**: fusiform lignified fiber having striated walls and funnel shaped pits.

Chemical tests of Cinchona

- **For cinchona:** on heating 0.5 gram powder in dry test tube, purplish red or carmine red fumes which condense as purplish red drops soluble in alcohol give solution with blue fluorescence
- **General test for alkaloid:** shake 0.1g powder with 2ml HCl filter, filtrate + mayer's reagent, yellowish white ppt:
- **Special test for quinine alkaloid:**

Powder alcoholic extracts is mixed with dilute H₂SO₄ ; blue fluorescence is observed