

Aim :-

Perform Microscopical study of Cinnamon bark.

Reference

Kokate C.K., Purshitt A.P and Gokhale S.B.
Nizali Publication, 56th edition Page no.
14.33 - 14.35.

Requirement:

- Glassware :-
 - Slide
 - ~~Cover slip~~
 - Wash Glass
- Chemical :-
 - Safranin reagent
 - Glycerin
- Others :-
 - Watery Dipped Cinnamon bark
 - Sharp blade / Razor
 - Microscope
 - Pen Brush

Theory :-

It consists of the dried inner bark of the shoots of coppiced trees of Cinnamomum zeylanicum Nees -

(*Cinnamomum verum* J.S. Presl.), Family : Lauraceae.

The trees are usually grown from seed in nurseries, and planted out on well-drained sandy or clayey soil at altitudes up to 500 meters. Soil, temperature, rainfall, and drainage have considerable influence on the quality of the bark. When the shoot of the seedling is few centimeters high, the tip is cut off to encourage the formation of lateral branches.

These are allowed to grow for two years, or until the bark begins to turn brown with the formation of a corky layer. The shoots are then 2-3 metres high, and 3-5 cm, in diameter. Developed trees are coppiced to induce the formation of a corky layer. The shoots are then 2-3 metres high, and 3-5 cm in diameter. Developed trees are coppiced to induce the formation of numerous leafy shoots.

Macroscopical Character.

- i) Colour : The outer surface is dull yellowish-brown, while the inner surface is dark yellowish-brown.

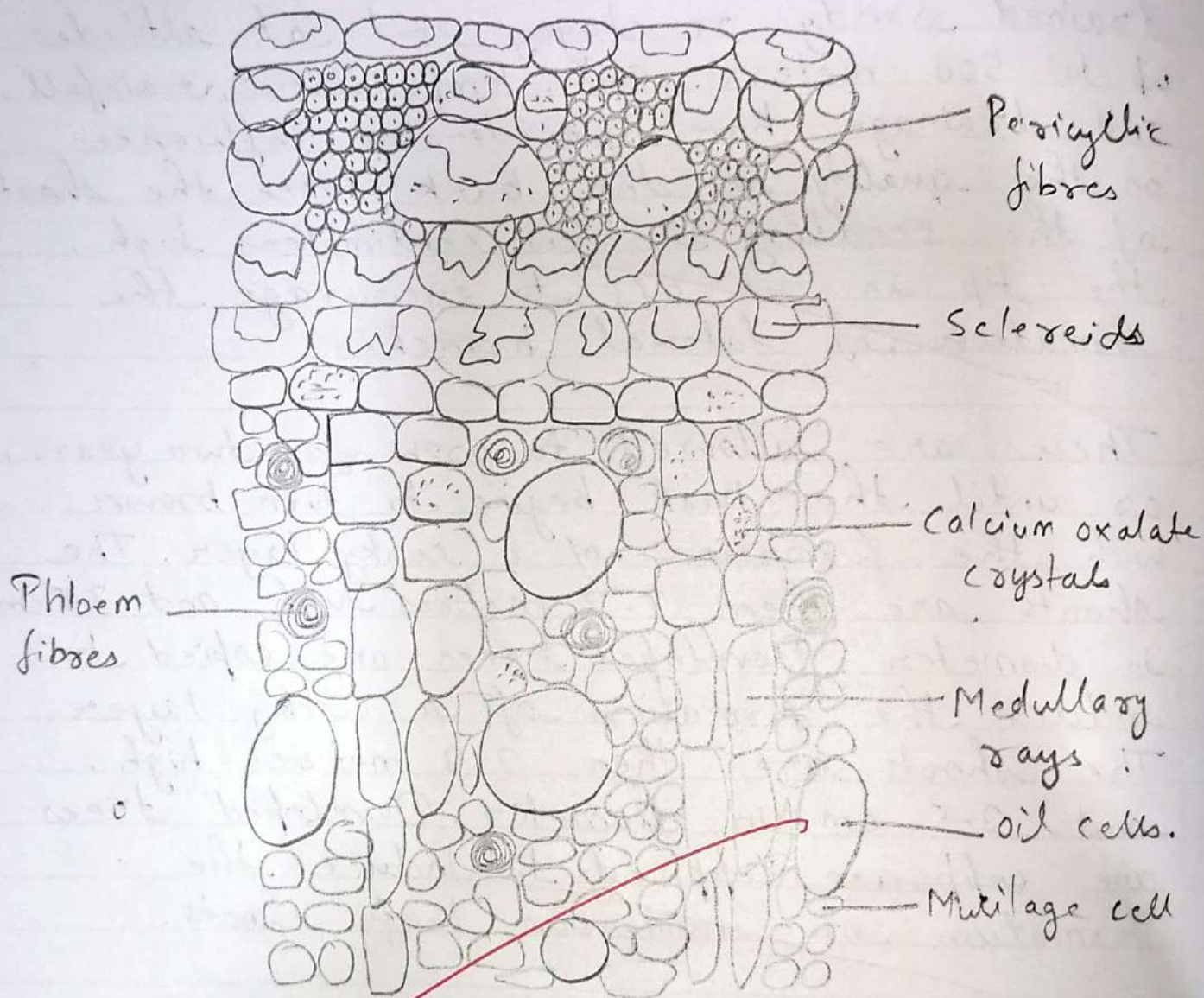


Fig 3 T.S. of Cinnamom Bark.

ii) Odour : Fragrant.

iii) Shape : Compound squill.

iv) Size : About 1 meter in length and 1 cm in diameter. The thickness of the bark is approx 0.5 mm.

v) Taste :- Aromatic and sweet followed by warm sensation.

vi) Fracture : Splintery.

Uses :

1. Carminative.
2. Stomachic
3. Mild astringent
4. Flavouring agent
5. Aromatic
6. Used as a spice and condiment
7. Preparation of candy, dentrifices and perfumes.

Procedure

1. Soak the cinnamon for overnight.

- Take a piece of cinnamon and cut it with the help of a sharp razor blade.
- Place the section in watch glass containing water.
- And then place the thin cutting T.S. of cinnamon on the glass slide.
- Add few drops of chloral hydrate (Decolorizing agent) and heat the slide for 30-40 seconds.
- Add 1-2 drop of photo glycerol and also 1-2 drops of HCl on glass slide.
- Add 1-2 drops of glycerin-water (50%) on the section.
- Place a coverslip over the final section without any air bubbles.
- Watch under a microscope (10x and 10x)
- Watch and draw all parts.

Result:

- Microscopical study of cinnamon bark was successfully performed.

Prof. Chokkiah
10/11/23

Teacher's Signature