

Aim:-

To perform transverse section (T.S.) cutting and microscopical study of fennel.

Reference:

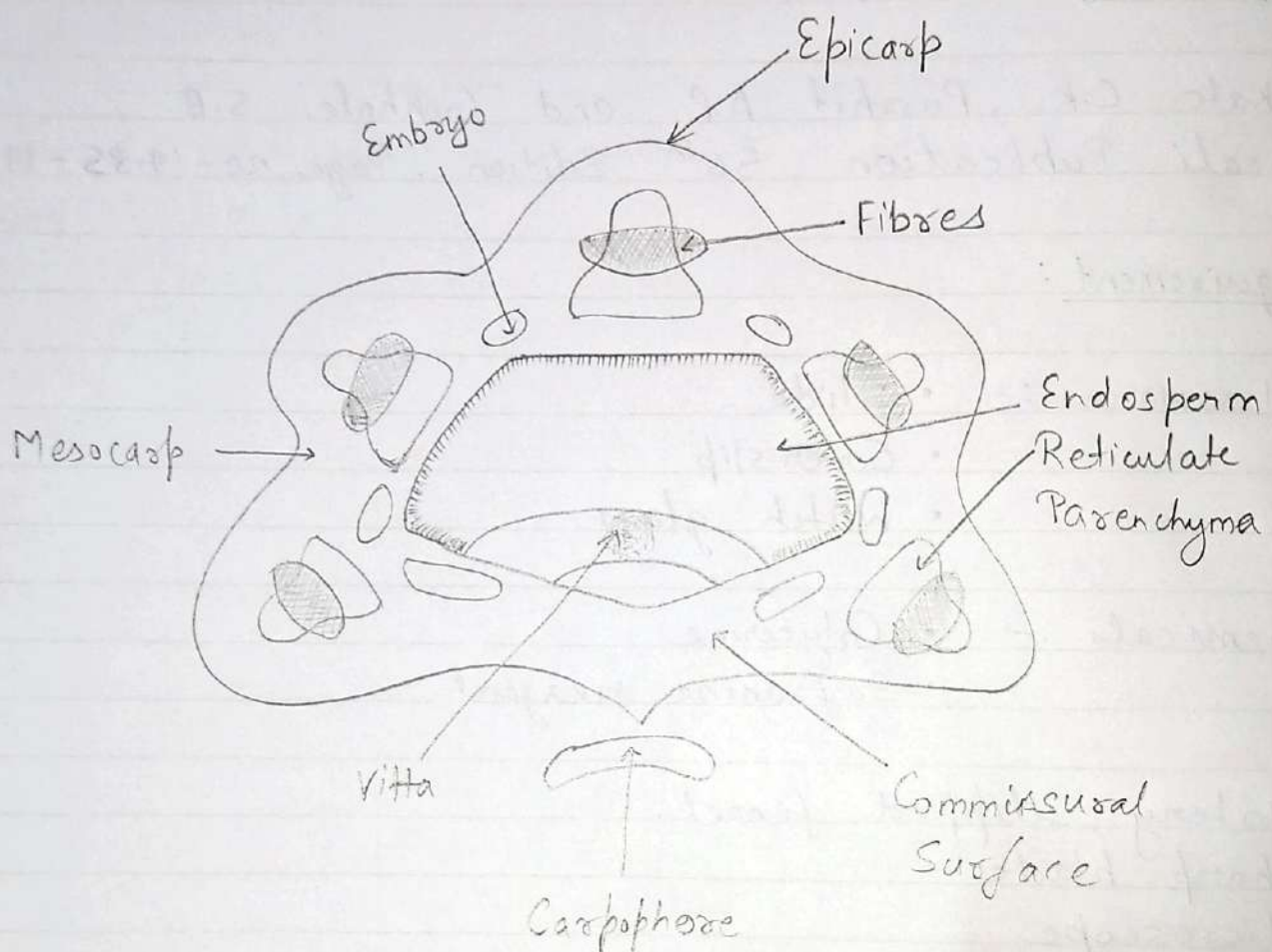
Kokate C.K., Purohit A.P. and Gokhale S.B.,
Nirali Publication, 56th Edition, Page no - 14.43 - 14.75.

Requirement:

- Glassware :-
 - Slide
 - Coverslip
 - Watch glass.
- Chemicals :-
 - Glycerine
 - Safranin reagent.
- Watery dipped fennel.
- Sharp blade
- Microscope
- Pen Brush

Theory:-

- Synonyms :- Fennel fruits, Fructus foeniculum.



T.S. of Mesocarp of fennel.

- Biological Source :- It consists of dried ripe fruits of the plant known as Foeniculum vulgare Millar, obtained by cultivation.
- Geographical Source :- It is largely cultivated in Romania, Russia, Germany, France, India and Japan. In India, it is cultivated in Gujarat, Punjab, Maharashtra, Rajasthan, Uttar Pradesh, and West Bengal.
- Cultivation and Collection :-

Fennel is cultivated by dibbling method. For good germination it sown just before the spring. Four to five seeds are put, at a time, in holes at a distance of 25 cm in between them. 90% of the fennel production comes from gujarat. Fruits are separated by thrashing.

Macroscopic Characters:

Colour : Greenish to yellowish-brown.
Odour : Sweet aromatic.
Taste : Strongly aromatic.
Size : 5-10 x 2-4 mm
Shape : Straight or slightly curved.

- Usage :-
- Flavouring agent
 - Carminative agent
 - Expectorant
 - Stimulant
 - Anthelmintic agent.

Procedure :

- Take a fennel which was dipped in water for overnight, or boiled at normal temperature for about 30 minutes so that the fennel may become soft and then easy to cutting.
- After dipping the fennel select 2-3 good pieces of fennel and place it on the watch glass.
- Then take a new and sharp blade and cutting the starting and end part of the fennel.
- Cutting a thin section of fennel and dipped into watch glass containing plain water.
- Transfer the section into the watch glass containing safranine reagent and allow it to stand for about 2-3 minute.
- Again transfer it into another watch glass containing plain water to clean the excess of stain.

- Now place the section on the glass slide and add 2-3 drop of glycerine to prevent drying of the section.
- Now cover the slide with a coverslip and observe under the microscope with 10x optical and 10X objective lens.
- Draw the diagram that are observed under the microscope.

Result:

The Transverse section cutting and microscopical study of fennel successfully performed.