Date:

Exp:No: 12

**Preparation Of A Leaf Cross-section**

Aim: To prepare the cross section and study the anatomy of a dicot leaf

**Materials required:**

Compound light Microscope, cleaning tissues, Pipette, Forceps, Slides ,Coverslips,Hand lens, New single edged blade, Carrot or potato pith,100 cm3 Beaker, Fresh leaf tissue, iodine green stain

**Method:**

1. Using a carrot block and sharp razor blade (illustrated below) cut extremely thin sections of one of the leaves and fl oat the sections into water in the beaker. Alternatively you may use two razor blades held together and drawn across a leaf which is resting on a wooden block.
2. The secrets to cutting good thin sections are: (a) use a new razor blade (b) keep the blade and the carrot surface moist. (c) use a sawing motion while working your way across the leaf section. (d) use a fine brush and not your fi ngers to transfer the sections to the Beaker and then to the slide. The leaf section may be much thinner at one end and this is the part that will be most useful to you.



1. Pick the thinnest one or two sections and make a wet mount slide.
2. Apply a cover-slip and clean up any excess moisture.
3. Observe first under low power then high power.

Observation:

Make a clear, labelled drawing of a cross section of the leaf. Label clearly the cuticle, upper and lower epidermis, palisade mesophyll, spongy mesophyll, vascular bundle (if seen) and the stoma or guard cells if seen.

Discussion:

Discuss the function of each of the different type of cell.