**Discuss the procedure involve in making of glass knife for cutting in ultrathin section**

Glass knives can be produced by hand using pliers with two raised bumps on one jaw and a single bump between the two bumps on the opposing jaw, but special machines called "knife-makers" are used in most electron microscopy laboratories to ensure repeatable results. The glass used typically starts out as 1-inch-wide (25 mm) strips of 1⁄4-inch-thick (6.4 mm) plate glass, which is cut into 1 inch (2.5 cm) squares. The glass square is then scored across the diagonal with a steel or tungsten carbide glass-cutting wheel to determine where the square will break, and pressure is then applied gradually across the opposite diagonal until the square breaks[citation needed]. This technique provides two usable knife edges, one on each of the two resulting triangles. The better the break is aligned with the diagonal, the better the cutting edge. To move sections around in a knife boat, some sort of hair is attached to either a toothpick or applicator stick. The most readily available source of short, fine-tipped hairs is eyebrows. Pull a few of these hairs out and pick the straightest ones. Put one drop of 5min epoxy on the end stick or toothpick and use jeweler’s forceps to insert the hair root into the cement. Once the cement has hardened, the tool is ready for use tape to the knife and then sealing it with nail polish. If the latter technique is used, dry the nail polish for at least 15min before use to decrease the possibility of boat leakage. Some workers apply a bead of molten dental wax some distance from the knife edge, which will hold several drops of water onto which sections can be cut.

**Draw a knife marker and label it**

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