

3<sup>th</sup> stage

# Microtomy & Paraffin sections

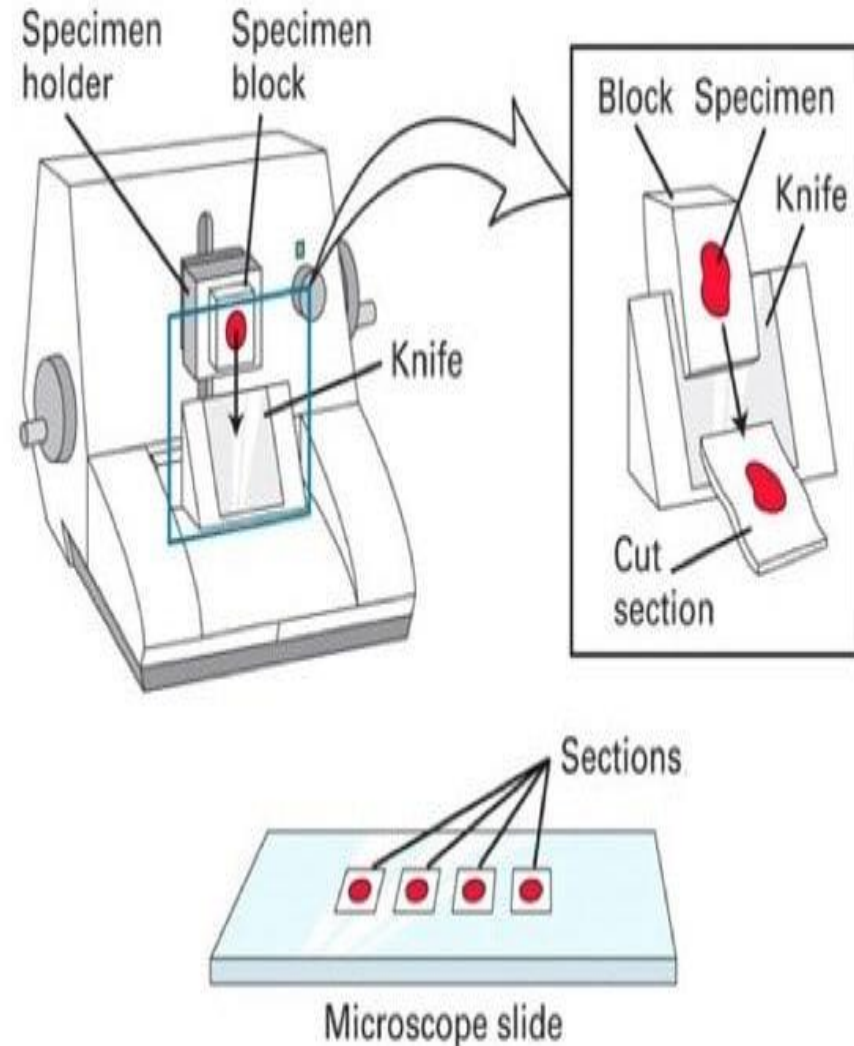
Lab 7



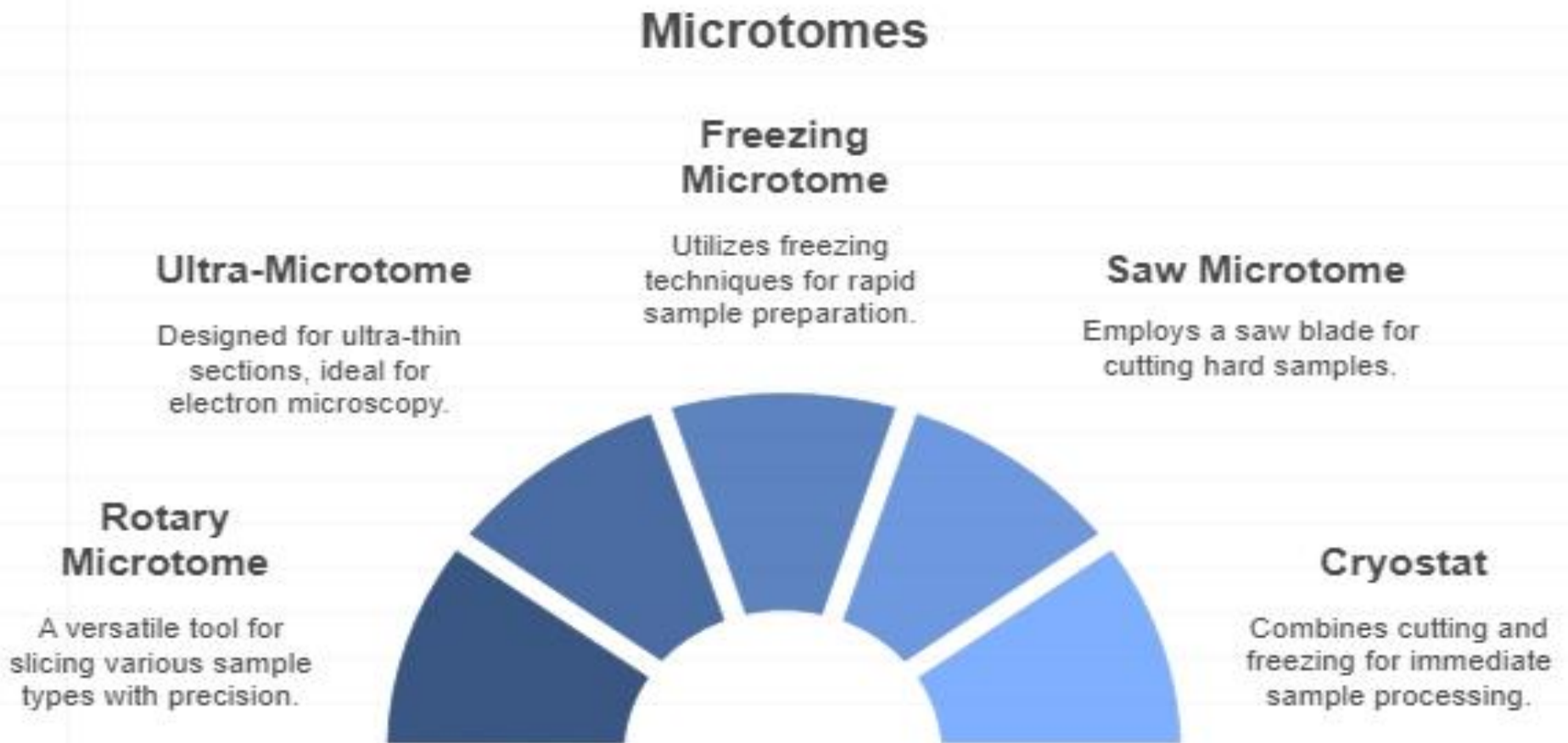
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# Sectioning

- Paraffin blocks are cut by microtome using metal knife into thin sections 3\_6 $\mu$
- A microtomes creating a “ribbon” of very thin sections for staining.
- The tissue mount on a microscope slide.



# Types of microtomes



# Instructions of using the Microtome

- 1. Stop the fly wheel by using special screw or lever.**
- 2. Insert the block-holder and tight by mean of lever.**
- 3. Insert the cutting knife and fix firmly by mean of two locking levers.**
- 4. Turn the fly wheel and bring the block down carefully , when it reach the level of the knife , leave the block-holder in tight level, then stop the fly wheel.**
- 5. Put the scale at 20 microns which indicate the thickness of the sections.**
- 6. Trim and get rid of the excess paraffin until reach the surface of the tissue .**
- 7. Put the scale at 7 or 8 micron thickness, and continue cutting , until you get a paraffin ribbon.**
- 8. Stop the fly wheel , but notes the block-holder in high level.**
- 9. Collect the paraffin ribbon by using a brush and needle to transfer it to a clean paper.**
- 10. Carry out the knife , clean it with a piece of gauze moistened with xylene, and place it it's wooden container.**
- 11. Remove the block holder.**
- 12. Clean the microtome with brush moistened with xylene.**

## **Cutting sections:- It is essential to insure that:-**

1. The knife is sharp and tilted to a suitable angle.
2. The block must be attached firmly to the block holder, which itself must be securely fastened to the microtome.
3. After trimming with the knife and microtome, the block sometimes need to be cooled with ice (remove block from the microtome and place on ice).
4. In order to obtain good ribbon, the front and the back edges of the block should be trimmed parallel to each other, if not, the ribbon will be curved.
5. The edges must also be parallel to the knife, otherwise the sections will not adhere to one another



Thank you