

Paraffin Microtomy – Black Microtomes

1. Fill water bath and preheat to 40° – 45° C.
2. Place paraffin blocks on ice or in refrigerator to cool.
3. When water reaches correct temperature, sprinkle small amount of gelatin on surface of water so that upon melting it will result in a thin film on the surface to cause sections to adhere to slides.
4. Place block in holder and clamp with vertical adjustable clamp.
5. Specimen advance can be reset by turning back crank on left side of microtome clockwise until stop, then counterclockwise a quarter turn. While doing this, place pressure on specimen holder to make sure that advance resets.
6. Place adjustable knife holder on microtome by pushing the center clamping arm to the right and sliding square plate at the base of the holder into the notch on the front of the microtome.
7. Place disposable blade in holder by pulling clamping arm on the upper right hand side forward and sliding the blade between the stainless steel plates. Then secure by pushing clamp back. NOTE: Blades have a thin film of oil that may need to be removed with acetone before using.
8. Unlock safety lock on advance wheel and rotate clockwise until the block is in a position where it can be aligned with the knife.
9. Adjust the block position with the three hand screws on the block holder until it is parallel to the block face in the horizontal and vertical planes.
10. Advance knife holder until as close as possible to block face and lock by pulling lower locking lever to left.
11. Move advance wheel clockwise back to locking position and lock in place.
12. Set desired section thickness with coarse knob at rear of microtome. Scale in micron gradations is just behind the advance wheel. A useful section thickness for glass slides is 5 to 10 microns.
13. Sections should be cut by turning advance wheel clockwise.
14. It is advisable to keep the block face cool with an ice cube for better sectioning results. Where section thickness is critical this is not advisable since thermal changes cause thickness changes.
15. When the desired sections are obtained, transfer them to the water bath with a wet paintbrush and/or probe and allow spreading on surface of water for a minute or more.
16. Sections can be placed on glass slides by putting slides under the water and lifting up to pick up desired sections.
17. Dip the section and slide into the warm water bath and allow section to stretch and flatten for a few seconds, then pick up section on slide again.
18. Slides with sections should be placed on warming plates to dry for at least an hour to ensure adhesion.
19. Record your full name and account number, and the number of hours you used the microtome on the record sheet.