

Section 10.21

PROCEDURE FOR VIBRATOME SECTIONING

Aim: Establishment of routine procedures for using the Vibratome

Purpose: All TRS personnel need to be competent in using the Vibratome so that tissues are cut quickly and distributed to researchers who need to process with low ischemic times.

Vibratome is an excellent basic vibratory tissue sectioning system. It cuts fresh or fixed, animal or plant tissue without freezing or embedding.

1. Gross trimming of the specimen is performed by a sectioning blade to achieve flatness and appropriate size to fit on the specimen mounting disk.
2. The specimen is attached onto the specimen mounting disk using sufficient adhesive mounting material. The surfaces onto which specimen is attached must be clean, dry and free from residual adhesives from previous applications.
3. Place sectioning blade on the blade holder with a desired angle which is adjusted by rotating the blade holder on its transverse mounting rod. The usable range of the blade angle for most of the applications is between 15 and 25 degrees.
4. Fill up the black vibratome bath with any suitable fluid like normal saline, buffered phosphate formalin, alcohol, distilled or deionized water. The bath should be filled to the level where the blade edge is submerged by 3 to 4 mm. The liquid bath can be externally cooled or heated.
5. Attach the specimen mounting disk with the specimen mounted on it to deluxe specimen bath which is fixed to black vibratome bath.
6. Turn the vibratome on. Set section thickness, speed and amplitude settings at zero and adjust the rearmost ready position.
7. Each sectioning cycle can be initiated by the operator and the instrument completes the section and returns to the rearmost ready position. The “Rules of the Thumb” to obtain good sections are slower forward speed, higher amplitude, steeper blade angle and colder bath.
8. The lamp/Magnifier may be used to facilitate close observation of the specimen during sectioning.
9. The sable brush or a blunt glass rod may be used to manipulate the section while it is in the bath.
10. After completion of the sectioning, the bath, mounting disk and blade holder should be cleaned.