

(Reviewed 8/09)

MICROTOME SAFETY

(For assistance, please contact EHS at (402) 472-4925, or visit our web site at <http://ehs.unl.edu/>)

Working with microtomes, whether preparing or cutting a sample, is a true art. You need specific hands-on training from your supervisor before using a microtome. Because of the associated hazards, safety must be incorporated into every step of the process to keep fingers and hands protected. Follow the safety tips provided below to keep your fingers, hands, and your artistic touch in perfect condition and to prevent exposure to solvents and biologicals.

- Handle blades very carefully when installing or removing. Follow the manufacturer's guidelines explicitly.
- Tungsten-Carbide knives can cut through your shoes if dropped. Be careful where your feet are positioned when installing or removing blades.
- Store blades in a covered container. Use a container that has guides to hold the blades rigid.
- Never leave blades on countertops. Lacerations can occur when reaching across the countertop and inadvertently contacting an unprotected blade.
- When setting up the microtome, position the sample first then put in the blade. **Never** the other way around.
- When applying the brake, ensure that it is tight. Most accidents occur when the brake slips and the operator's hand is drawn into the blade.
- When leaving the microtome, even for a short time, ensure that the blade guard is in place.
- When preparing a paraffin sample for the Microtome, remember to clamp the sample down tight. The movement allowed by a loose clamp increases your risks of cuts.
- Use forceps to retrieve slices from the boat and to retrieve ribbons, thereby keeping your hands free from the moving parts of the microtome.
- To avoid compression or knife marks, ensure that your blade is clean. Follow the manufacturer's guidelines for cleaning. A high-density polystyrene rod can be used to clean the blade, freeing your hands from potential contact.
- Prions are not deactivated by the standard microtome preparation steps. You must wear gloves and use appropriate decontamination procedures when samples may contain prions.