**2016 Glycobiology Research and Training mousephenotype core**

**Signature form before using Microtome Utilize Safety Features Properly**

1. You must be familiar with the safety features of the microtome you are using and observe some basic rules when cutting sections.
2. Microtome knives and disposable blades are extremely sharp and can inflict serious injuries unless appropriate care is taken when working with them.
3. Accidents occur when a microtomist is distracted and not concentrating fully.
4. Use forceps or brush instead of your fingers to pick up sections or wax fragments from blade or block face.
5. Leica rotary microtomes are equipped with a safety guard (knife guard or finger-guard), a hand-wheel lock and a hand-wheel brake to enable safe operation.
6. The safety guard can be positioned to cover the whole length of the cutting edge.
7. The hand-wheel lock will lock the object head at the top of the cutting stroke and must be used when changing blocks.
8. The guard must be in place and the hand-wheel lock engaged when a block is being placed into or removed from the cassette clamp, or when any manipulation of the block is being undertaken while the knife or blade is in place. The guard must also be used when the microtome is left unattended.
9. The hand-wheel brake will lock the microtome when the handle is in any position and is used when realigning a block face or adjusting the coarse feed.
10. The knife or blade should be removed from the microtome when the instrument is left unattended or when cleaning the instrument. This is best done by unclamping the blade, then using the blade ejector on the left side of the guard to start moving the blade laterally out of the clamp. It can then be grasped with forceps (not fingers) or picked up with the magnet at the end of the Leica brush and safely removed. Used blades should be disposed of appropriately in a sharps container or into the used blades slot in the base of the blade dispenser.
11. Never place a knife or blade on the bench or in a box with the cutting edge facing up. If you happen to drop a blade, let it fall. On no account try to catch it (a natural reflex action that you must guard against).
12. The knife or blade should be removed from the microtome when the instrument is left unattended or when cleaning the instrument. This is best done by unclamping the blade, then using the blade ejector on the left side of the guard to start moving the blade laterally out of the clamp. It can then be grasped with forceps (not fingers) or picked up with the magnet at the end of the Leica brush and safely removed. Used blades should be disposed of appropriately in a sharps container or into the used blades¿ slot in the base of the blade dispenser.

**Set Blade Clearance Angle Optimally**

1. Blade clearance angle is adjustable and must be set for optimum performance. The clearance angle prevents contact between the knife facet and the face of the block.
2. The facet angle is the angle between the two facets that form the cutting edge. For routine use knives and disposable blades are made with a facet angle of approximately 35, but this angle can vary with the blade type and from manufacturer to manufacturer.
3. Therefore for each blade type the clearance angle must be optimally set. Follow the microtome manufacturers guidelines for the recommended angle setting.
4. Before placing slides in a slide drier or oven drain them vertically for a brief time to remove excess water.
5. Skim the water surface with lint-free tissue between blocks to avoid the possibility of cross-contamination.
6. To avoid any chance of a mix-up float out sections from one block at a time.

**Clean and Maintain the Microtome Thoroughly**

It is important to remove accumulated tissue debris and wax after use. Regular preventative maintenance is important.

1. Clean the instrument daily.
2. Always remove the knife or blade before cleaning.
3. The knife holder can easily be removed to facilitate access for cleaning.
4. Section waste is best removed with a dry paintbrush.
5. Do not clean the outer surfaces with alcohol or xylene as they are not resistant to these solvents and exposure to xylene should be avoided. Paraffin remover, mild commercial household cleaners or soap and water are recommended.
6. No fluid must enter the inside of the instrument during cleaning.
7. Have the instrument inspected at least once a year by a qualified service technician
8. Follow the lubrication instructions provided in your instruction manual using recommended lubricants.

**Signature of user Signature of Principal Investigator**

**Date Date**