**Cleaning the Zeiss AxioVert 200 Microscope: Words of Wisdom from Dr. Lisa Mace**

Should be cleaned regularly by Lab

1. Occular lenses (eye pieces)
2. Aperture Lenses (3 circular lenses above the condenser)
3. Objective Lenses (lenses beneath the stage)

Should only be cleaned by Zeiss Rep

1. Apotome grid
2. Reflector cube

**General Rules for Cleaning and Things to Keep in Mind:**

* Eyepieces can be removed and used as hand-held magnifying glasses for looking at and cleaning other microscope pieces.
* Always blow before you start to clean – many times most of the dust or larger dirt particles will come off with blowing. This can also prevent scratching any lens.
* The only supplies you need to clean the microscope are lens paper, lens cleaner, Q-tips and ethanol
  + Note: Normal Q-tips are Teflon coated and when wet with ethanol or lens cleaner, the glue breaks down and can get on/into the scope
    - Use Fisher medical grade cotton to make your own
* Prolong Gold or any other mounting media MUST BE COMPLETELY DRY before imaging any slide or coverslip 🡪 clean slides with Kim Wipe and lens cleaner
* If you do want to use Windex or Sparkle Red instead of the Zeiss lens cleaner, you must set them by a window that receives ample light until they turn clear, otherwise the color that each of the cleaners contain could stain the lenses.
* If suds are left behind on a lens, this is generally an indication that you are using too much lens cleaner.
* Lens paper can be used to clean everything EXCEPT reflector cube lenses and Apotome lenses… which should only be cleaned by a Zeiss rep anyways…
* If you change the bulb and it looks smoky or frosty, call Zeiss rep ASAP!

**Cleaning the Occular Lenses:**

1. Blow off as much dust as possible.
2. Use ethanol to clean the eyepieces frequently as they are a sight of increased levels of bacteria.
3. Otherwise, use lens paper and lens cleaners to gently wipe the lenses.

**Cleaning the Aperture Lenses**

1. Swing the lenses outward to the left to more easily access them.
2. Blow off as much dust as possible.
3. Start with top lens and work your way down
4. Use lens paper (folded into quarters) and lens cleaner (3-4 drops) to wipe the circular lenses – can be fairly aggressive with these.
5. Use a dry sheet of lens paper to “polish” the lenses.

**Cleaning Objective Lenses**

1. Blow off as much dust as possible.
2. Fold lens paper several times (hotdog style), place one finger on top of the lens paper positioned on top of the objective, and pull the lens paper with the other hand, wiping it across lens while applying slight pressure with your finger.
3. Inspect lens closely with eyepiece…
4. If still dirty, use Fisher cotton to make own Q-tip and lens cleaner to gently wipe lens.
5. If still dirty, use the home use the “home-made” Q-tip and ethanol
6. If there is still something on the lens, call Lisa

Notes specifically pertaining to the 63X objective lens!

* Amount of oil to use: small drop that should be applied to (and remain in) the small well of the objective 🡪 If the oil feels like it is going to drip at all, you are using too much
* Wipe oil off EVERY time before applying more and every time you are ever getting up to leave the scope
* Wipe oil off in the same manner as described in step #3 above.
  + Never use same section of the lens paper to wipe the objective a second time.
* Need to keep a small hair scrunchy made of absorbent material (like terrycloth) around the base of the objective to absorb any excess oil.