

# SWIFT OPTICAL INSTRUMENTS, INC.

Microscopes • Digital Imaging Products

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## “Care and Feeding of Microscopes 101”

### Care and Maintenance of Compound Microscopes

- The most important aspect of caring for your compound microscope is to keep it **clean and dry**.
- Whenever your microscope is not in use, make sure it is protected with a dust cover. (Even when stored in a cabinet.)
- Make sure lenses are clean before your microscope is stored and put away.
- Before cleaning the lenses, make sure that any dust is removed from the surface of the lenses. This can be done by using “canned air”, a rubber bulb syringe, or a camel hair brush.
- Always use optical lens paper dampened with optical lens cleaner to clean the lenses. You may also use a clean microfiber cloth.
- Clean the lenses by starting in the center of the eyepiece and wipe in a spiral motion to the outside of the lens.
- Always make sure lenses are cleaned after every use. Allowing dirt to dry onto a lens can make it very difficult to clean later. Be especially careful to keep the 100X oil immersion lens free of oil. The bottom lens of a 100X objective is very tiny and recessed into the metal housing. Oil can get into the tiny recesses. Some 100X objectives are sealed (especially on newer and more expensive microscopes). It is still important to clean off any oil, even if the objectives are sealed. It is also important to keep the 40X objective clean and dry. On newer microscope models, the 40X objective may also be sealed, but still needs tender loving care (to be kept clean and dry)!
- To keep high power objectives clean and dry, instruct your students to use a cover slip when making wet mounts. High power objectives have a smaller working distance and can easily come in contact with a slide in use. If the bottom of a lens comes in contact with a liquid, the liquid may move by capillary action into the spaces between the objective lenses. (Not a good thing☹).
- Once a week move the focus mechanisms of the microscope through the full range of their movement. This prevents the lubricant that covers the surfaces that slide against each other during focusing from building up and creating ridges that may interfere with focusing over time.
- Clean the surface of your microscope with a soft cloth dampened with a mild detergent. Do not use any abrasive cleaners as these will scratch the surface of the microscope.



- Compound microscopes should be serviced by a trained technician every two to three years or after 200 hours of use.
- Stage Drift: If you have a problem with your scopes drifting out of focus, there should be an adjustment collar on the inside of the coarse focus knob (usually left side), tighten, with clock –wise turn using the small tool that comes with your microscope, sometimes called a “C-wrench”.

### **Care and Maintenance of Stereo Microscopes**

- As with compound microscopes, the most important aspect of caring for your stereo microscope is to keep it **clean and dry**. Always use a dust cover whenever the microscope is not in use, even when stored in a cabinet.
- Keep your lenses clean and dry. You may use the same technique as with compound microscopes.
- Once a week, move the focusing mechanism of the microscope through its full range of motion to prevent the lubricant from building up over time.
- Your stereo microscope should be serviced by a trained technician every two to three years or after 200 hours of use.

***“A Clean Microscope is a Happy Microscope! “***

#### **Classroom Tip!**

Did you know that an empty micro pipetter tip box makes a great microscope kit box? Fill it with toothpicks, tweezers, coverslips, slides, cotton, transfer pipettes, and lens paper. It keeps everything neat and handy.



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