

Instructions for Image Capture on the Zeiss Axioplan Upright Microscope

Black and White Image Capture

1. Turn on the appropriate light source. If using the fluorescent lamp, allow 5 minutes once the bulb has fired for it to stabilize.
2. Find and focus your sample. For transmitted light, be sure to do Koehler illumination for each new objective.
3. For DIC imaging, adjust the prism position and the condenser aperture in order to get the desired level of contrast, resolution, and gray level.
4. Power 'On' the camera control box labeled "Orca".
5. Open Image Pro Plus >> Acquire >> Video/Digital
6. Select the Preview tab to get a live view of the image.
7. Adjust exposure time, light intensity, gain, and binning in order to get the desired image. Neutral density filters are available to adjust light intensity on the microscope. A green filter can be inserted to remove chromatic aberration and deliver the optimal wavelength to the camera.
8. Check the Acquire tab to make sure that the settings are the same as the Preview settings.
9. Click "Snap" to acquire an image.
10. Image sequences can be acquired using Image Pro Plus as well. If time-lapse is desired, please contact the facility director to learn how to do this.

Color Image Capture

1. Turn on the appropriate light source. If using the fluorescent lamp, allow 5 minutes once the bulb has fired for it to stabilize.
2. Find and focus your sample. For transmitted light, be sure to do Koehler illumination for each new objective.
3. For DIC imaging, adjust the prism position and the condenser aperture in order to get the desired level of contrast, resolution, and gray level.
4. Power 'On' the color camera control box and the Sony monitor.
5. Adjust the position of the sliders to direct the light to the camera.
6. White balance the image to ensure appropriate color representation.
7. Adjust exposure time, light intensity, and gain in order to get the desired image. Neutral density filters are available to adjust light intensity on the microscope.
8. Freeze the image. Toggle to "B" to manipulate a second image if desired.
9. Open "Adobe Photoshop" >> File >> Import >> Color CCD
10. Click "Capture" to acquire the frozen image.
11. If the raw image needs more adjustment, close this box and return to the manipulations on the microscope and the camera control box.