

# OLYMPUS BX51M

**1. Position:** This microscope is located in Room 402B of HOC and the one away from the door.

**2. Watch samples under microscope:**

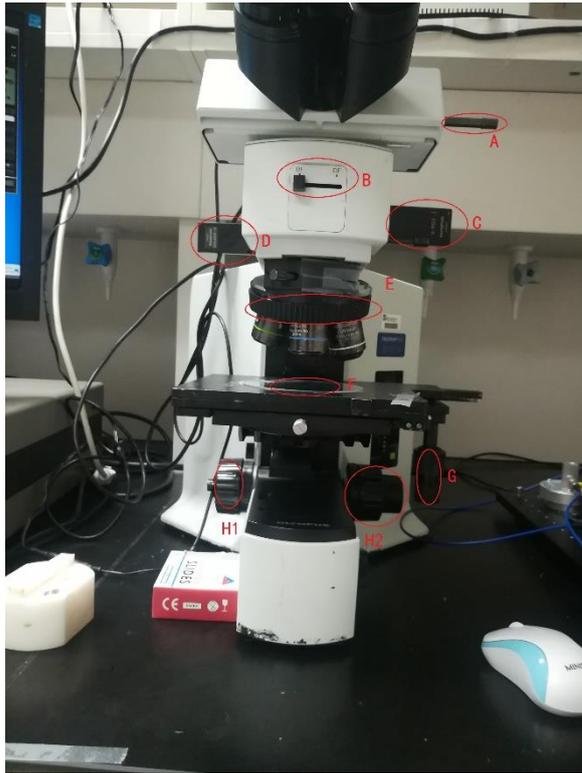


Figure 1a



Figure 1b

**2.1** Load your samples on the stage (F in Figure 1a), rotate the disk (E in Figure 1a) to select one appropriate objective lens. You can spin the G knob (in Figure 1a) to adjust the stage (F) back and forth, left and right in horizontal direction. Also you can adjust the H (in Figure 1a) knob to adjust the course and fine focus. However, if you still can't focus, you can use the screwdriver (L in Figure 1b) to loosen the L (in Figure 1b) screw to change the height of stage by a large margin.

**2.2** Press the K (in Figure 1b) button to turn on the light and spin the M (in Figure 1b) knob to change the brightness (if you want to change the light source, you can unscrew the I machine in figure 1b and screw on a new device like laser device which is near this microscope).

**2.3** You can put A bar (in Figure 1a) in and out to adjust the watching mode.

**2.4** You can move the B button (in Figure 1a) left and right to watch samples under bright field and dark field respectively according to your needs.

**2.5** You can adjust the depth of C plate (in Figure 1a) to see through polarizer and D plate (in Figure 1a) to see just under green light.

### **3. Use camera to watch samples:**



Figure 2a



Figure 2b

**3.1** Turn on the A switch (in Figure 2a), spin B knob (in Figure 2a) to the mode you want, generally the green sign is to take pictures and the sign opposite the green sign is to make videos. If you want to load or unload the

camera, you should **press C button (in Figure 2a) and then spin the camera gently to take it on or off.** After that, you can see an IR filter (in Figure 2b).

It filters out IR as **the internal IR filter of the camera has been removed** if



Figure 3a

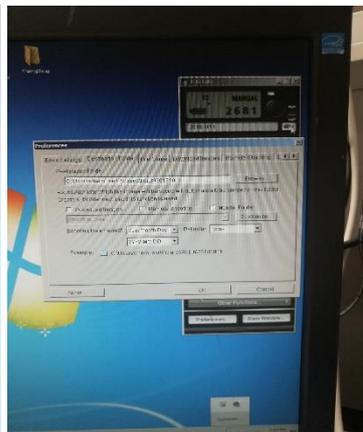


Figure 3b

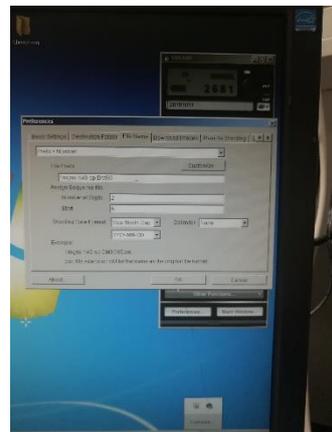


Figure 3c

natural image is needed. In case of IR image, the IR filter should be removed.

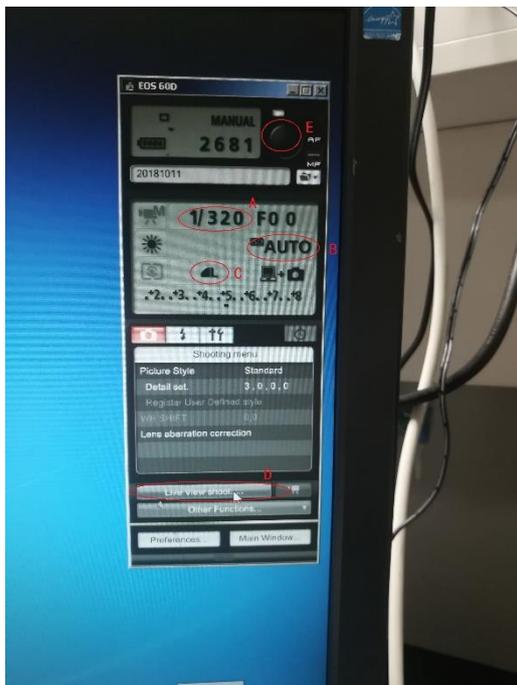


Figure 3d

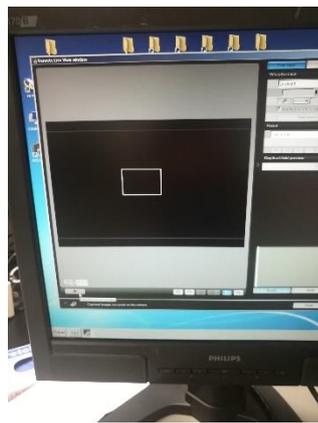


Figure 3e



Figure 3f

**3.2** After turn on the camera with video mode, you can click on “camera shooting” as shown in Figure 3a. Now click the button as the mouse arrow located in Figure 3b. Then select a file position and make names and numbers as Figure 3b and 3c shown, click on OK to continue. Then click on D button (in Figure 3d) to get the view as shown in Figure 3e. Click the start button and stop at any time you want. Then quit the view screen, you can see the Figure 3f, click on “Download” to save your videos.

**3.3** In the camera mode, you should click on the E button (in Figure 3d) to take pictures.

**3.4** If the light is too dark or bright and the knob of the light source doesn't work, you can try to change the photo sensibility and resolution by adjust the AB buttons (in Figure 3d) and C button (in Figure 3d) respectively.

**4. After use:** Turn off the light source, take away your samples and turn off your computer after you copying your data.

## Axiovert 100M

**1. Position:** This microscope is located in Room 402B of HOC and the one near the door.

**2. Watch samples under microscope:**

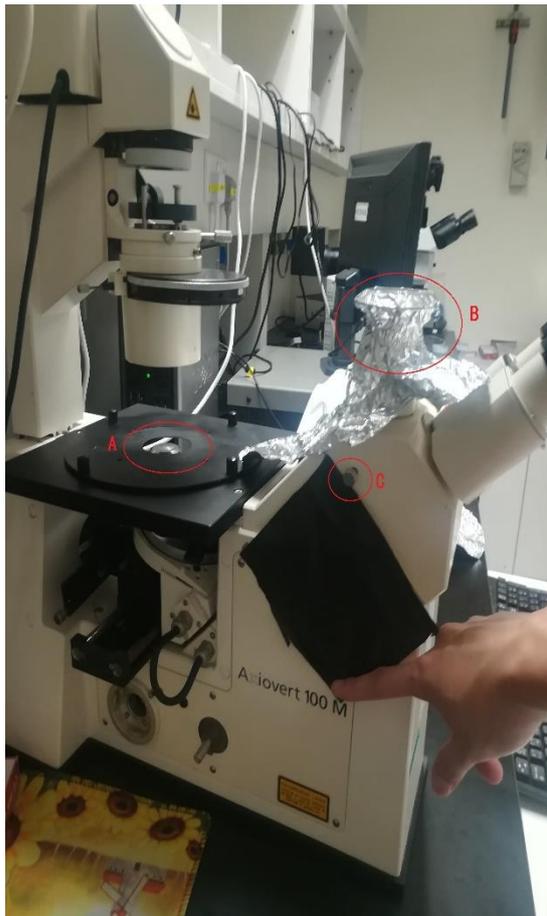


Figure 4a



Figure 4b

**2.1** Put your samples on the stage A (in Figure 4a), you can move your samples horizontally by moving the disk on stage A. Note that when you use this microscope, your samples should put on a **cover glass** due to its thinness. What's more, when you use the objective lens with the biggest

magnification ( $63\times$ ), you should **drip just one drop of DI water on the central surface of the objective lens to form a water film.**

**2.2** Switch on the F button (in Figure 4b) to open the light source and rotate the G knob (in Figure 4b) or put the C bar (in Figure 4a) in and out to adjust the brightness. Note that when you unload the camera, the lens cone (B in Figure 4a) should be covered with Al foil.

**2.3** You can use the very small white knob (E in Figure 4b) to adjust the focus.

**2.4** You can use D (in Figure 4b) bar to change the view mode.

**3. Use camera to watch samples:** The same as **OLYMPUS BX51M** as demonstrated above.

**4. After use:** Turn off the light source, take away your samples and turn off your computer after you copying your data.

# SAIKEDIGITAL

**1. Position:** This microscope is located in KBS and the one not in the clean room.

**2. Watch samples under microscope:**



Figure 5a



Figure 5b

- 2.1 Press the button at the back of the microscope to turn on the light source.
- 2.2 Put your samples on the stage and choose one desired objective lens.
- 2.3 Spin the A knob (in Figure 5a) to move the samples horizontally.
- 2.4 Spin the B knob (in Figure 5a & 5b) to adjust the focus.
- 2.5 Press the C button (in Figure 5a) to change the Reflection or the Transmission mode.
- 2.6 Rotate the D knob (in Figure 5b) to change the brightness.

### 3. Use camera to watch samples:



Figure 6a

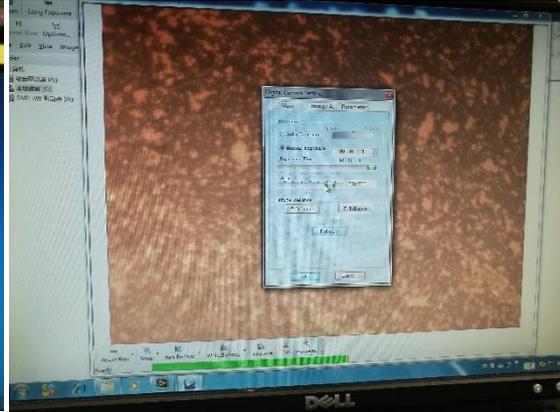


Figure 6b

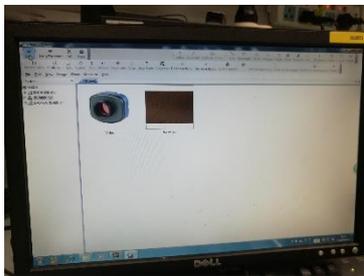


Figure 6c

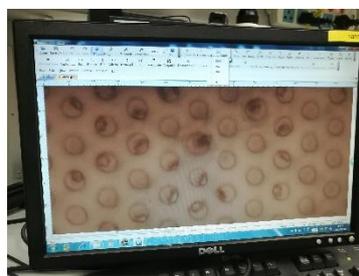


Figure 6d

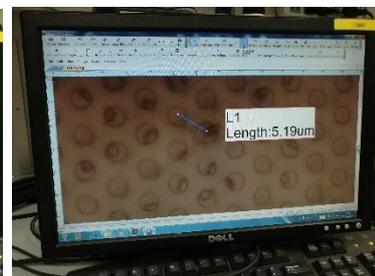


Figure 6e

3.1 Click twice on TSView7 as shown in Figure 6a.

3.2 Take pictures and save as shown in Figure 6b. Tips: you can adjust the gain value in “Properties” to change the photosensitivity.

3.3 If you want to measure the substance in your picture, you can open your image as shown in Figure 6c. Then select your magnification in “Calibrate Table” column as shown in Figure 6d. After that, you can click on the “Line” column to select the particular distance and read the length as shown in Figure 6e.

4. **After use:** Turn off the light source, take away your samples and turn off your computer after you copying your data.

Attached videos:

1. [AXI 100M---Drop oil](#)
2. [AXI 100M---Clean oil lens](#)
3. [AXI 100M---Objective lens cleaning](#)
4. [AXI 100M---Water lens cleaning](#)

### Quiz

1. Why the IR filter is needed to put between the camera and microscope when you want a natural image in HOC?
2. As for Axiovert 100M microscope (This microscope is located in Room 402B of HOC and the one near the door), you should use which kind of glass to load samples, slide glass or cover glass? What should you do before putting your samples onto the stage with objective lens of the biggest magnification (63×)?
3. How to unload the camera of the microscopes in HOC?