

Instructions for camera change/negative developing for all TEMs

If you have taken 4 images or less, you can leave without changing the camera. The next person will have to develop your negatives. However, it is always recommended to develop your own negatives if the results are important for you and as a courtesy to others. **IF YOU HAVE TAKEN MORE THAN 4 IMAGES YOU MUST CHANGE THE CAMERA! THE CAMERA SHOULD ALWAYS HAVE AT LEAST 46 UNUSED CASSETTES!**

Before venting the camera, make sure:

- the FILAMENT knob is set to OFF (for 100CX this is not necessary but recommended);
- for 2000FX and 3010: the PHOTO switch lamp is NOT lit. If the PHOTO switch lamp is lit, turn off the FILM ADVANCE AUTO switch and depress the PHOTO switch once;
- The ACCEL VOLTAGE READY and the FILAMENT (for 2000FX) lights are green.

Put on gloves! Turn off direct light.

1. Vent the desiccator that is located just outside the microscope room in the corridor for 2000FX and 3010. The desiccator for 100CX is in the microscope itself. Dispensing magazines (FILM) for 3010 are labeled.

You should not use the magazines designated for another microscope under any circumstances! When handling the magazines, hold them so as to prevent the magazine lid from opening!

It is important to desiccate the plates for about 24 hrs before putting them in the microscope. To ensure this we keep two magazines for 2000FX and for 3010. You should take the magazine that is on the right side of the desiccator (see the lid of the desiccator, position "Microscope") to the microscope and move the magazine that is on the left (position "Desiccate") to the position on the right. When you reload the magazine that you have used during your session, it will go in the position "Desiccate" on the left in the desiccator. This does not apply to 100CX.

2. Take the dispensing magazine from the desiccator (**position "Microscope"**) to the microscope room and put it on the microscope table. Get an empty receiving magazine from the drawer in the dark room.
3. Turn the camera door handle fully clockwise, wait for the camera to vent. Open the camera chamber door.
Carry out the next steps as quickly as possible so as to avoid exposing the camera chamber to the atmosphere longer than absolutely necessary.
4. Draw out the magazine stand by pulling the handle.

5. Remove both magazines and put them aside on the bench
6. Place the new dispensing magazine and an empty receiving magazine in the microscope aligning the arrows on the box and in the corresponding stands in the microscope. Make sure that they sit firmly. The spring in the dispensing magazine will push the plates to the top and you will hear and feel it. If this doesn't happen, take the dispensing magazine back to the dark room and check if it is O.K.
7. Push the magazine stand fully in.
8. Close the camera chamber door and push it. While holding the door closed, turn the door handle counterclockwise as far as it will go.

It is always useful to check the O-ring and its contact surface of the door for dust, lint, etc before closing the camera chamber door.

The microscope will start pumping the camera. Do not leave for the day until you have checked that the camera valve is opened (the ACCEL VOLTAGE READY and the FILAMENT (for 2000FX) lights should be ON).

9. Please do not forget to reset the number of unused plates in the microscope. For 2000FX and 3010, go to PAGE-1 on the CRT display by pressing the PAGE button and type FUN 50. **Do not change the film counter (number) under any circumstances!**

Film developing

1. Get the box of new film from the drawer in the dark room.
2. Make sure that the dark room benches are clean, dry and you have developing racks nearby.
3. Turn on the safe light. Turn off the main light. If you wait for a few minutes the light will become brighter.
4. Remove the lid from the receiving magazine and gently remove the exposed film from cassettes and place it in a developing rack, making sure that negatives do not touch each other.

Develop for 4 min, put in the stop bath for 1 min, fix for 4 min, rinse for at least 20 min in running water. (While developing, lift the rack with film up and down every 30 s or so in order to stir the developer.) Afterwards, place the negatives on the bench to dry.

Fill in the log book in the dark room.

Film loading

You must reload the cassettes that you have used! No exceptions! Please be considerate to others and fill the dispensing magazine properly!!! Or face the consequences.....



If somebody's session on the microscope is ruined because of incorrectly loaded plates, the person who loaded the plates incorrectly will be charged for that session. Please report any problems with the camera to Lou or Evgenia.

Wear gloves! You should put another pair of gloves after handling the chemicals in order to prevent the fresh film and magazines from getting wet!

1. Carefully remove the lid from the dispensing magazine (the one that has the word FILM on top/side of it). Be careful because the spring will push any remaining negatives out of the box.
2. Fully depress on the sides of the cassettes remaining in the magazine until the bottom plate is clamped. Be careful not to move the film from its correct position.
3. Insert a new film into each empty cassette with the emulsion side up. **The emulsion side of the film is up when the notch is in the upper right corner!!!!** Check that all four corners of the film are under the four corners of the cassette.
4. Carefully place the cassettes in the dispensing magazine, one by one, aligning the notch on the cassette and in the magazine and close the lid.
5. Put the remaining unused film back in its original the envelope, wrap it and put it in the box. **Make sure that you do this properly so that the film doesn't get exposed to light!**
6. Put the empty receiving magazine and the film box in the drawer and clean the dark room.
7. Place the dispensing magazine (FILM) that you have just loaded in the desiccator in the **position "Desiccate"** and evacuate the desiccator.

Do not remove the developing racks from the dark room.

Collect dry negatives promptly.

Thank you for your cooperation!