



### Core Imaging Facility

Ben Fowler, Manager  
(405) 271-7545  
<http://Imaginglinux2.omrf.ouhsc.edu/>

### Oklahoma Medical Research Foundation

825 N.E. 13<sup>th</sup> Street  
Oklahoma City, OK 73104  
405-271-6673  
800-522-0211  
<http://OMRF.org/>

## Darkroom Protocol for the Development of EM Negatives

### The darkroom used by the Imaging Facility is located in M233

Each user is responsible for bringing their own D-19 developer (Kodak®) which can be used to develop approximately 140 negatives as follows:

4 minute development time for the first 70 negatives,

5 minute development time for the 2<sup>nd</sup> 70 negatives.

Make sure your developer is at room temperature before you begin.

Fixer is community property, but should be tested prior to developing.

The overhead light switch is located to the right of the revolving door when you first enter the darkroom. It is ~5ft up from the floor.

The red (photo-safe) light is located across from the revolving door above the bench. This light plugs in for use, and should be unplugged when you leave the darkroom.

### ***Developing Setup:***

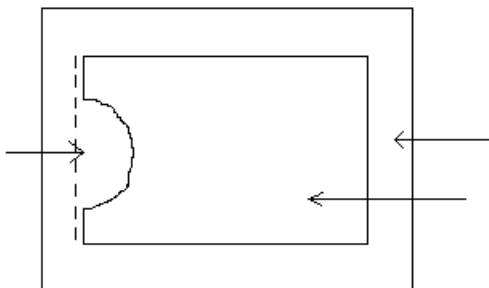
Fill the silver chamber (far left in sink) with developer. Turn on the nitrogen tank (to the left of the sink), using the main tank valve. On silver box (in sink, to left of development chamber) turn switch to continuous and adjust nitrogen flow via regulator to a gentle “boil”. Once adjusted, move switch to “timed”. This will send a pulse of nitrogen into your developer ~ every 15 seconds.

The black box is for rinse water: place under center tap and fill, then let water continue to flow at a reduced rate to refresh the chamber.

Before opening box containing undeveloped film or negatives, you must turn on the red light and turn off the overhead light.

### ***Removing Negatives for Development:***

Negatives will be housed in cassettes:

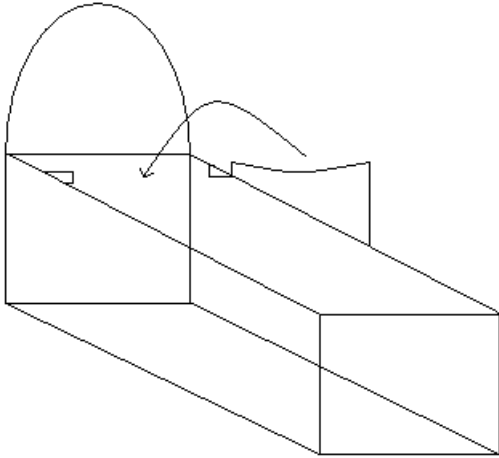


To remove the negative, gently push from left side to separate negative from cassette at the tab, then grab edge and pull back toward the left to remove completely. Touch the negative on the edges only, and as little as possible.

Place the negatives in one of the acrylic racks. The 12-count rack accommodates the negatives in the landscape orientation (longer x-axis) while the 18-count rack accommodates them in the portrait orientation (longer y-axis). **Due to the variable level of solutions in your developing setup, we highly recommend the use of the 12-count developing racks for optimal results.**

Negatives are inserted in the slots and when properly positioned will be slightly bowed.

Make sure that the negatives are not touching each other.



Once all your negatives are loaded, you are ready to begin developing.

### ***Developing Protocol:***

1. Place the rack into the developer and set a timer for 4 to 5 minutes (see notes in introduction for more information.)
2. Transfer the rack to the tap water rinse for 2 minutes. (Set the timer)
3. While your negatives are rinsing, remove both lids from the fixer (right-hand side of sink).
4. Transfer the rack into fixer and set a timer for 8 minutes. You can turn the overhead light back on after the negatives have been in the fixer for at least 4 minutes.

### **When you turn on the overhead light, DON'T FORGET TO UNPLUG RED LIGHT!!**

5. Move the rack from the fixer back into the tap water rinse for approximately 30 minutes.

While your negatives are rinsing, the following tasks may be done:

- a) Replace both lids on fixer.
  - b) Use a funnel to transfer your developer back into your bottle.
  - c) Fill the developer box about ½-full with water and set nitrogen on continuous flow to purge the line. Turn nitrogen off (using main tank valve) and empty water from developer box. Leave the developer box upside down to dry.
6. After the 30 minute rinse, turn off tap water and add ~ ½ cap of Fotoflow® to rinse water. Then, slowly lift and lower the rack to agitate, but don't let bubbles form. After a few dips, remove the rack and place it on a paper towel.
  7. Remove negatives one at a time from the rack by grabbing the edges. Hang each negative by a corner using clothespins. Let the negatives dry for at least two hours before you remove them from the line..
  8. Rinse out the black box filled with tap water. Leave it upside down to dry.
  9. Turn out white light when you leave.