

DARKROOM PROCEDURES FOR LOADING and DEVELOPING BLACK and WHITE FILM and MAKING BLACK and WHITE CONTACT PRINTS and ENLARGEMENTS

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Load the film holder with black and white film. Usually Tri-X (ASA 300) or Plus-X (ASA 125) is used. The film emerges from the canister with the emulsion on the concave side. Be sure the film is placed in the film holder with the emulsion side out - toward the grating. Cut the strip of film to the proper length, insert it into the film holder and then insert light shield. Now the film holder can be carried to the spectrograph and fastened to the back focus holder. Before making photographs, pull the light slide out far enough to expose the entire film strip to the grating. Do not pull the slide all the way out. After exposures, insert the light slide and remove the holder from the spectrograph. You are now ready to develop the film.

- a. In the dark room with no lights and no SAFELIGHT on remove the film from the film holder. Be careful not to touch the emulsion. Thread the film on to the reel that goes into the developing tank. This takes practice and should be practiced in the light with an exposed film strip to see and learn the procedure. Different reels load differently. Put the reel into the tank and screw the lid on firmly.
- b. Develop the film in Microdol-X DEVELOPER for about 7 to 10 minutes (8 minutes is a good average). To do this, turn the lights on and pour the Microdol-X into the hole at the top of the developing tank making sure the film is covered. Gently bump the tank several times against the sink and swirl the tank to "slosh the developer" and loosen bubbles. Set timer clock for 8 minutes and wait.
- c. When time is up, dump DEVELOPER back into the DEVELOPER jug. Keep the top on the tank. Fill the developing tank to the top - twice with tap WATER, slosh a bit and pour the water down the drain. This water rinse will take about 15-20 seconds.
- d. Pour FIXER solution into developing tank, making sure it covers the film. Slosh tank a bit and fix (leave set) for at least 10 - 15 minutes. At this point the top of the tank can be removed to take a look at the film to see if it contains any "exposed areas". If so put it back in the fixer.
- e. When fixed, dump FIXER back into the FIXER jug. Rinse with tap water for at least 10 minutes by putting spigot WATER hose into the center of the film reel and running WATER through slowly. Film can be left in the wash for hours without damage.
- f. After rinse, carefully remove film from reel and hang it to dry. Do not touch the emulsion -ever! One end of the film can be fastened with a clip and hung on a nail; the other end should be weighted with another clip to keep the film stretched and straight.
- g. After film strip is hanging, take a soft paper towel or kleenex and gently wipe the WATER from the film. Simply wrap the kleenex around the film at the top and drag the kleenex slowly from top to bottom. Do not press or squeeze too hard. Do this twice. This removes most of the water and prevents water spots. Leave it hang to dry. This takes about 3/4 hour.

Make a contact print of the negatives.

- a. Cut the 24 or 36 exposure film strip into segments 6 frames long.
- b. Turn on SAFE LIGHT (keep it dim). Remove a sheet of photographic paper from its container.
- c. Put the negative strips (emulsion side down) in contact with the sheet of photographic paper (emulsion side up) and lay a flat sheet of glass on top to press the negatives against the paper.
- d. Illuminate with room lights (or other light) for a "short time" (a few seconds).
- e. Set up 3 trays in the sink for the processing chemicals: one on the right for the DEVELOPER, one in the middle for the WATER, one on the left for the FIXER.
- f. Develop the print in Dektol DEVELOPER for about 20 seconds, (until the exposure is satisfactory) rinse in water for about 3 seconds and then put it in the FIXER for at least 10 minutes.
- g. Finally wash the print in WATER for about 15 minutes and then hang or lay out the print to dry. This takes about an hour.

Make a 4x5 inch (or other size) black and white enlargement of each negative.

- a. To do this put the negative strip in the film carrier emulsion side down.
- b. Put film carrier in the enlarger and close slot (small lever on the left side).
- c. Select a frame, adjust the magnification and the focus.
- d. Turn on enlarger light (toggle switch) to project the negative on to the easel. Adjust easel borders to fit and securely hold the 4x5 inch paper. Adjust the position of the easel and enlarger magnification to get the desired picture in the framed area. (Record the magnification - negative to print). Turn off the enlarger light (toggle switch). Turn off room lights.
- e. Turn on SAFE LIGHT. CAUTION: Keep safe light as dim as possible so it doesn't expose the sensitive Multigrade Paper. Remove sheet of photographic paper from the package. Lift the frame and insert the 4x5 inch positive photographic paper (emulsion side up). Lower the frame carefully which will securely clamp the paper to the easel.
- f. Set the enlarger automatic timer indicator to 15 (to expose the image for 15 seconds). Push the automatic timer button. This will switch the enlarger light on for 15 sec and then switch it off.
- g. Remove the paper and develop the prints as described above.