

# Monroe Community College (3 credits)

## PHO 106 Fall 2010 Lecture 381, Lab 385 & 386

Instructor: Joe Ziolkowski “ Joe Z. “ 20100913

### Processing Photographic Film

1. Have Fun!
2. Chemistry should be set up in this class, we use working solutions straight out of the jugs. Do not toss empty jugs, we reuse them.
3. Go to enlarging darkrooms and load film in total darkness on to the film reels and place in developing tanks. Make sure your darkroom door is locked so someone from outside cannot open the door and expose your film.
4. Once the film has been loaded and is in the closed and light tight container, bring the loaded film canister to the film processing room.
5. Obtain a constant water/chemistry temperature, I try for 70° F.  
The Developer is the most important to have at proper temperature.
6. Obtain film processing time based on type of chemistry, dilution of chemistry and temperature of chemistry.
7. Fill film processing tank with 70° F filtered water and close tank.  
Agitate tank for 50 seconds. This gets the film ready for the chemistry.
8. Dump out the water after a total of 1 minute.
9. Add developer to your tank, close lid and agitate to for the recommended time.  
See development tables Small tank (closed, cylindrical container that holds a single stack of spiral reels)  
First tap the tank against the sink or counter to dislodge air bubbles that cling to the film.  
Then agitate at a rate of about 3 inversion cycles (down, up) every 30 seconds.  
Each inversion cycle should take about 1 second.  
Dump developer down the drain after use. Do not put back in the jug.
11. Stop Bath 30 seconds agitate continuously.  
Pour stop bath back into jug to reuse. Do not dump down the drain.
12. Fixer 5 - 10 minutes. Usually twice as long as it takes the film to clear (lose its milky appearance); usually 2 to 4 minutes in liquid-concentrate  
Agitate continuously for the first 30 seconds and at 30-second intervals after that.  
Pour Fixer back into jug to reuse. Do not dump down the drain.

13. Water Rinse 30 seconds Agitate continuously for the first 30 seconds.

You can take the lid off at this point and see your film under white light.

14. Hypo Clearing Agent 1 to 2 minutes agitate continuously.

Pour Hypo Clearing Agent back into jug to reuse. Do not dump down the drain.

15. Wash 5-10 minutes. Run the wash water fast enough to provide a complete change of water in the container using filtered water. Fill the tank to overflowing with fresh water and then dump it all out. Repeat this cycle 5 - 10 minutes.

16. Photo Flo Wetting Agent 30 seconds Provide gentle agitation for 5 seconds of the total time. To reduce drying scum, mix KODAK PHOTO-FLO Solution with distilled water in areas that have hard water. Place 16 ounces in a clean 8 x 10 tray. Take film off reel, place in tray, transport to dryer. At the end of the class, Dump Photo Flo down the drain. Do not reuse.

17. Dry As necessary Hang film in a clean, dust-free place. Low heat 15-20 minutes.

After Processing Wash and dry all the equipment that came in contact with chemical solutions.

18. Turn off all water when finished.

19. When thoroughly dry, store negatives in sleeves or envelopes away from dust and extreme temperature and humidity.

20. Using a Sharpie pen on the top of the film, write your name, film processing time, keyword, and date, this is very important.

Quick Guide of steps:

1. Water Bath: 1 minute.
2. Developer: See chart for time based on chemistry temperature.  
30 second agitation, then 5 seconds every 25 seconds.
3. Stop Bath: 30 seconds.  
Constant agitation.
4. Fixer: 5 - 10 minutes  
30 second agitation, then 5 seconds every 25 seconds.
5. Water Rinse: 30 seconds.  
Constant agitation.
6. Hypo Clearing Agent: 1 to 2 minutes agitate continuously.
7. Wash 5-10 minutes. Continuous, make sure you dump water and refill.
8. Photo Flo Wetting Agent 30 seconds.
9. Dry film.
10. Clean up and make sure everything is dry. Photo is Phun!