

The Photographer's Formulary

Photographic Workshops

Lab Assistant Instructions

Introduction

Bud & Lynn Wilson and the staff of the Photographer's Formulary would like to welcome you to Condon, Montana and thank you in advance for your participation as a lab assistant in our photographic workshops.

Additional welcome to the Formulary discussion.....

Safety with Photographic Chemistry

USED IN THE MANNER FOR WHICH THEY ARE INTENDED and according to mixing and handling instructions, chemicals used in photographic processes present no unusual hazards to either the user or the surrounding environment. Most chemicals are organic compounds that oxidize easily or otherwise deteriorate into relatively harmless substances. Some chemicals require very little in the way of handling precautions. Sodium Chloride (table salt) or Sodium Bicarbonate (baking soda) are common examples. Others certainly do. All strong acids or strong bases require careful handling as do other specialty chemicals which might be breathed in or absorbed through the skin. Always keep the following in mind:

1. Familiarize yourself with the chemicals you are using. If you are unfamiliar with the substance ask someone who is or use the internet to look up the Material Safety Data Sheet. If you are unsure about how to handle a compound, ask someone who does.
2. Prepare the work area and yourself. Make sure the area is clean. Make sure the mixing vessels are clean. Make sure you have adequate ventilation. Wear dust masks, eye protection, and rubber gloves as needed. Don't eat or drink while you are preparing chemical solutions. Keep cleanup materials handy. Focus on the task at hand and avoid distractions.
3. Read the mixing instructions provided with the kit thoroughly. Pay particular attention to any special handling instructions.
4. Mix chemistry exactly as specified in the instructions. Pay particular attention to the solution temperatures required to dissolve chemicals. Many require warm or hot water. Some formulas produce heat as a byproduct of the chemical reaction so you may need to start with cold water. Other chemicals dissolve best in a solution of the correct PH (acid/base) so in order for them to mix at all the sequence may be important. Some may require a "pinch" of sulfite or other additive to provide the right characteristics for the solution to form. Most importantly, some chemical reactions produce unwanted vapors or other byproducts if mixed improperly.

5. Clearly label the storage containers. It is often useful to write mixing instructions on masking tape and attach it to the container used for the stock solution. Ex) 1-1-16; Sol A- 1, Sol B- 1, Distilled Water - 16. The date mixed can also be very helpful.
6. Make sure the storage containers are suitable for the chemistry. Some may require a glass or hard plastic container.
7. Avoid spilling but when you do always clean up thoroughly.

Disposing used or outdated chemistry

In general, most chemical solutions may be discarded after use by flushing the solution down the sink drain with plenty of water. There are exceptions. The Formulary saves all used fix (hypo) baths to recover the silver. All solutions containing heavy metals are saved in clearly labeled containers for later disposal in an environmentally friendly manner. Save hypo, dichromate's, selenium toners, and gold toners. If you are uncertain as to how to discard used solutions ask your instructor or the Formulary staff.

Lab Assistant Responsibilities

As a Photographer's Formulary laboratory assistant you have 3 primary responsibilities.

The first is to our workshop participants.

Photographer's Formulary Workshops are designed to provide skills and knowledge needed by a wide range of photographers. Some simply wish to improve their abilities or add to the list of techniques for which they are familiar. Others want to develop the skills needed to work as a professional photographer. Still others look to place their work within the ranks of the world's leading fine art. Working with our students you will soon find that many will achieve all of the above and then some. We feel very fortunate to have the opportunity to associate with such people and ask that you do your best to help them achieve their photographic goals. We want each and every student to leave believing they have received the best possible instruction in the best possible facility with the best possible support.

The second is to our workshop instructors.

We think it fair to say that our instructors are the best. After working with them for a few days we think you will agree. The instructor's job is to present information and methods so their students can achieve their goals in photography. You play a central role in this process by helping to prepare for class, setting up and assisting with work sessions, and using your own knowledge and experience to help those who need it. You may find that the content of the course is material is something completely new to your experience. After all, many of the alternative processes taught at the Formulary aren't exactly common knowledge. Nevertheless, your background and experience will enable you to quickly learn the material and more importantly help the instructor pass these skills on to the students.

Last but not least you have a responsibility to yourself.

The many and varied photographic subjects presented at the Formulary offer a tremendous opportunity to gain valuable information and skills. No matter how familiar you may be with the subject matter it is a rare workshop that you don't learn something new and important to your future work as a photographer. Be sure to schedule your lab work around lectures, first so you are current with the material during practical exercises but also so you can gain information for yourself. Allocate time to practice some of the procedures yourself. You will likely be busy much of the time but it's a rare workshop where you can't find some time during the day for your own projects. Evening sessions offer plenty of time for your own experiments. Incidentally, a great deal of learning occurs while assisting students.

Work schedule

It is not possible to define one daily lab routine that meets the needs of every workshop. So you must work with the instructor and the formulary staff to decide what is needed to make the day's tasks go smoothly and prepare for tomorrow's schedule. In general you should pay attention to and accomplish the following:

Shortly after your arrival at the Formulary meet with the instructor to find out his or her expectations, also, make a point to introduce yourself to the formulary staff. Will you be mixing chemistry? If so what? Will you be doing photocopying? If so, where is the machine and how does it work? Will you be doing other errands? If so, what? Where do you obtain new chemicals or supplies? Where do you dispose of old chemicals or supplies? Will you be assisting students with the operation of enlargers, timers, or other lab equipment? Work with the instructor and staff to familiarize yourself with lab equipment and by all means share your knowledge with the students.

Evaluate the state of the darkrooms and other facilities that you will use. We hope that the previous assistant left the facilities in reasonably good shape; clean and organized. Don't be surprised, however, if one of your first tasks is to wash trays or clean a darkroom. Sometimes people have a short cleanup time before they catch a flight so you might find it necessary to put forth some elbow grease to get things clean and ready.

One duty that stays common with almost all Formulary Workshops is the operation of a darkroom available for use during the workshop and in the evening. Again, depending on the workshop, have a plan to prepare fresh chemistry prior to the day's working sessions. You will probably be sitting in on the instructor's morning lecture so make sure your stock solutions are prepared before breakfast in the morning or preferably the night before. You might need to depart a lecture a little early to mix working solutions if their tray life is short but certainly you can have your sink layout prepared, trays scrubbed & ready, and the layout labeled clearly for the instructor and students.

Pay attention to the chemistry tray life. Prepare an adequate volume of working solution to meet processing needs. It's not unusual to run two separate develop, stop, fix, clear, wash lines. Three to four liters of working solution is generally enough for any given tray, but again work out this detail with your instructor. Mix stock solutions with distilled water but most working solutions can be mixed with tap water. All film developer and most print developer working solutions should be made with distilled water. Rotate fix baths; move the 2nd bath up and mix a new final fix bath. Our tests show that fix times run between 3-5 minutes per bath. Do you want to see for yourself? Get a test kit from the Formulary and run some tests; great information for you and the students. Hypo clear baths exhaust very quickly but are inexpensive; make a new one.

Anticipate the chemistry needed from the Formulary and pick up sufficient chemicals to last through a working session or two. The staff at the Formulary is there to help but keep in mind that they have a job filling orders for other customers.

Conserve hot water. It is quite amazing how much hot water can be used by running warm water through the print washer. Besides the expense, the bed and breakfast staff is preparing meals and needs enough hot water to wash dishes. So watch your hot water consumption. Run warm water for a short time and switch to cold. The wash may take slightly longer but who cares. Use hot or warm water to ensure the chemical processes work correctly but don't leave hoses running warm water down the drain.

Encourage workshop students to manage the flow of their own work through the line, but help them out. This generally means moving prints from the fix /clear / rinse to a final wash and removing prints from the final wash for drying. Generally, a "squeegee" on the BACK side of a print is sufficient preparation for drying. But some photographers prefer other methods so work with them as needed to move work through the process and get the photos to the drying rack.

Workshop participants come from all walks of life and all skill levels. Some will likely have more years in a photo lab than you have altogether. Others may have very little lab experience. Try to tailor your assistance to their skill level. Offer help. If they decline OK, if they need assistance provide it. Still, one of the goals of any workshop is to provide students with the skills needed to go home and do these processes on their own. If someone does all their work for them they won't learn these skills.

Budget time to clean up after each session, almost all workshop participants are well aware of the need to clean up after themselves and will offer to help. Allow them to do so, even if you could clean up and put things away faster by yourself. People try to make the most of their time spent at the Formulary so work sessions often go long into the night. In these cases the students should be expected to clean up after themselves.

Evening work sessions are a perfect time to work on your own skills. Often, during a workshop you spend a lot of time assisting others. Make some time to work on your own projects, especially in the evening.

When the workshop nears completion budget time for a final clean up, try to leave the facilities in at least as good condition as when you find them.

Finally, photography is fun. So is lab work. Enjoy your stay.