

SAFE AND HEALTHFUL DARKROOM PRACTICES

While the majority of the black and white chemicals are in the range of non-toxic to slightly toxic to most people, black and white developers and color chemicals are in the range of slightly toxic to toxic, especially if these developers or color chemicals are ingested, inhaled or come in contact with bare skin.

To protect yourself from possible bronchitis, sinusitis, increased allergic sensitivity, skin rashes and a host of other more serious damage (that primarily comes from long term and consistent unsafe exposure), please read the following rules for handling photo chemicals in the labs. It is vital to your health that you follow these rules!

It is also vital to your health that if you have bronchitis, sinusitis, allergic-sensitivity, are pregnant or planning to be so soon, or are taking any medication (especially lithium carbonate based!) that you consult your doctor to make certain that it is safe for you to work around photographic chemistry.

Please advise your instructor if you have any medical history that may cause complications due to the presence of photographic chemicals. If you are pregnant, for example, especially if you are in the first tri-semester, you probably should not! be around color chemistry. Please check with your doctor if you have the slightest doubt about your sensitivity to chemicals now, or if you notice any even slight change in your health during the course of this photo class. We all want you to stay healthy and live a long, productive life as an artist.

Now For The Rules:

1. You must wear gloves or use tongs when processing black and white paper. The only place you may use bare hands is to remove prints from the water bath or to wash prints. Developers are toxic, especially if absorbed through the skin over long periods of time.
2. When processing color you must use gloves for both film and paper processing. Color chemicals are very toxic!!! You may use bare hands to wash prints after they are out of the processor, but you should wear gloves to hang film. Stabilizer has formaldehyde in it!!!
3. You must bring a cloth towel (bath size and fluffy preferred) to the lab if you are going to work. A towel helps greatly in cutting down chemical contamination only if you regularly use it to dry your hands, and if you take it home each week and wash it to remove toxic build up of chemicals in your towel.
4. Only labbies or an instructor may mix up chemistry. If you need chemicals mixed seek out a labbie or an instructor.
5. Clean up any chemical spills immediately. Flood the area with cold water and wipe up with paper towels, cleaning until you are certain the chemicals are gone. Chemistry dries, turns to powder, gets on clothes and books, and then into your lungs or it is absorbed into your skin.
6. No eating or drinking in the lab.
7. If you use gloves or tongs, wash your gloves with soap before you remove them, then wash them inside and out with soap and hang to dry. Whether you use gloves or tongs, wash your hands thoroughly with soap before smoking, drinking or eating.

You Should Be Aware Of What To Do In Case Of These Emergencies:

INHALATION OF CHEMISTRY: get person to fresh air, call 911 and send someone for the school doctor.

INGESTION OF CHEMISTRY: call poison control (941-411) and tell them what the person ingested and follow their directions to help the person. Check the MSDS (Material Safety Data Sheets) for a complete breakdown of any chemicals we use if poison control needs more data. DO NOT induce vomiting unless poison control tells you to.

ELECTRICAL SHOCK: if necessary, turn off power at main switch in fuse box (Call 911, send someone for the school doctor).

CHEMICALS SPLASHED INTO EYES: Immediately flood the eyes with cold water and continue to flood them for 15 minutes. Seek medical attention immediately.

CHEMICALS SPLASHED ON SKIN: Immediately flood skin with water until chemical is washed away. Seek medical attention immediately if you sense you need it, or if any change in skin condition occurs.

Attached is a brief outline of the hazards and precautions for most of the chemicals you may come in contact with this semester. Please read the data carefully so you are familiar with both hazards and precautions, and prevention.

Poison Control Center
1319 Punahou St.
Emergency
Kodak Health Services

941-4411
911
1-800-833-1661

DARKROOM HAZARDS

VERY TOXIC

BLACK AND WHITE DEVELOPERS

Hazards: Skin and eye irritants. Can cause allergic reaction and allergic sensitivity. Especially hazardous in *stock* mixing stage.

Precautions: To mix stock solutions wear goggles, gloves and respirator or dust mask. Use gloves when mixing working solutions. Avoid skin contact with powders and solution.

COLOR DEVELOPERS

Hazards: Much more toxic and hazardous than black and white developers. Extreme care in handling necessary. Can cause severe skin allergies, asthma and if absorbed by skin, nervous system poisoning and permanent damage.

Precautions: If you are pregnant do not use color chemistry. If you are allergy prone avoid prolonged exposure to color chemicals since they can cause allergic sensitization. If taking lithium carbonate based medicine you should not have contact with color chemistry. If any of these three situations exist for you, see your doctor and follow his advice in terms of taking color photography.

All color chemical stock mixing must be done in a well-ventilated room. Use goggles and gloves for Bessler and Kodak chemistry; use goggles, respirator and gloves for Cibachrome chemistry.

STOP BATH

Hazards: Concentrate is highly toxic by skin contact, inhalation or ingestion. Continued inhalation of working solution can cause severe sinusitis and bronchitis.

Precautions: Only lab assistants and instructors can mix stop bath. If you use at home, use goggles, gloves and respirator designed for acids. Always measure water first, then add acid. If you splash stock solution on skin, flush immediately and thoroughly with cold water. If you splash stock in eyes, flush immediately and fifteen minutes with cold water and seek immediate medical attention.

SLIGHTLY TOXIC

FIXER

Hazards: Not significantly hazardous, although may cause irritation of skin and allergies.

If splashed on skin rinse thoroughly with cold water. If splashed in eyes flush immediately and for fifteen minutes with cold water and seek medical attention.

COLOR BLEACH, FIXER AND STABILIZER

Hazards: Slightly hazardous. May irritate skin, eyes and respiratory passages with repeated exposure.

Precautions: Avoid skin contact. If splashed on skin flush immediately and thoroughly with cold water. If splashed in eyes, flush immediately with cold water for fifteen minutes. Seek immediate medical attention.

Avoid overheating these and any color chemicals as toxic gases form above 105° (degrees). Always use gloves and goggles when handling color chemicals. Dispose of color chemicals one at a time down the sink drain, followed by a one–two minute flush with cold water to avoid mixing chemicals and creating toxic gases above the P-Trap in the drain. For Cibachrome, follow manufacturer's suggested disposal techniques.

NOTE: Toners are not covered thoroughly in this handout. Some toners are highly toxic, some are mildly so. Consult the manufacturer's information, directions and outline for use and advice. Some toners, for example, release hydrogen sulfide (poisonous) when mixed with acids found in stop bath or fixers, so never mix acid with toners. Always wash prints thoroughly before you tone them.

If you decide to tone prints, make sure you do so safely and in a well ventilated space. Follow the manufacturer's directions carefully. If you plan to do any toning at school see the lab assistants or instructors first.

BASIC SAFETY PROCEDURES SUMMARY

1. Read and follow all instructions and safety recommendations provided by the manufacturer before undertaking any process. This includes mixing, handling, disposal, and storage.
2. Become familiar with all the inherent dangers associated with any chemicals being used. When acquiring chemicals, ask about proper handling and safety precautions.
3. Know the antidote for the chemicals you are using. Prominently display the telephone numbers for poison control and emergency treatment centers in your working area and near the telephone.
4. Many chemicals can be flammable. Keep them away from any source of heat or open flame to avoid a possible explosion or fire. Keep a fire extinguisher that can be used for both chemical and electrical fires in the work area.
5. Work in a well-ventilated space. Hazardous chemicals should be mixed under a vented hood or outside.
6. Protect yourself. Wear thin, disposable plastic gloves, safety glasses, and a plastic apron. Use a disposable face mask or respirator when mixing chemicals or if you have had any previous allergic reactions. If you have any type of reaction, consult a physician immediately and suspend work with all photographic processes.
7. Follow mixing instructions precisely.
8. Keep all chemicals off your skin, out of your mouth, and away from your eyes. If you get any chemicals on your skin, flush the area immediately with cool running water.
9. Do not eat, drink, or smoke while handling chemicals.
10. Always pour acids slowly into water; never pour water into acids. Do not mix or pour chemicals at eye level, as a splash could be harmful. Wear protective eye wear when mixing acids.
11. Avoid touching any electrical equipment with wet hands. Install shockproof outlets in your darkroom.
12. Follow instructions for proper disposal of all chemicals. Wash yourself and any equipment that has come into contact with any chemicals. Launder darkroom towels after each session. Dispose of gloves and masks to avoid future contamination. Keep your work space clean and uncontaminated.
13. Store all chemicals properly. Use safety caps or lock up chemicals to prevent other people and pets from being exposed to their potential dangers. Store chemicals in a cool dry area away from any direct sunlight.
14. If you are *pregnant* or have any pre-existing health problems, seek medical advice before attempting any chemical process in photography.
15. Remember, people have varying sensitivities to chemicals. If you have had allergic reactions to any chemicals, you should pay close attention to the effects that darkroom chemicals have on you, and you should be extra careful about following all safety procedures.

These guidelines are not designed to produce paranoia but to ensure that you have a long and safe adventure in uncovering the many possibilities that are available in the realm of photography. Remember that your eyes, lungs, and skin are porous membranes and can absorb chemical vapors. **It is your job to protect yourself.**