

UVM DARKROOM SAFETY GUIDE

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"Damn. The dark is leaking out of the dark room again."

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IN CASE OF EMERGENCY: DIAL 911

This booklet will provide you with the information you need in order to run a safe and legal darkroom at University of Vermont.

If you have any questions regarding this guide or darkroom safety please contact **UVM Risk Management & Safety** by e-mail at safety@uvm.edu This Safety department is responsible for overseeing darkroom safety on campus. The darkroom supervisor is the primary contact for information about safety training, hazardous waste removal and other safety concerns; Safety staff can provide technical advice to darkroom users.

GUIDE OVERVIEW

This guide contains valuable information that will help you run your photography darkroom safely and efficiently. It is every users responsibility to read and understand this guide. Darkroom instructors are responsible to make sure all darkroom users read and understand this guide. If you have any questions regarding any of the information covered in this guide, please contact Safety staff at safety@uvm.edu In case of an emergency (fire, personal injury or a major chemical spill), call 911. If you have a non-critical building service need (e.g. UVM Physical Plant electrician, plumber, ventilation), call UVM Service Operations at 656-2560, press 1 to speak to a dispatcher.

BEFORE YOU USE THE DARKROOM...



TRAINING/RECORD KEEPING

All students and faculty working in a campus darkroom must, at a minimum, have online Chemical Safety and Darkroom Training before they use UVM's darkroom facilities.

Go to: <http://www.uvm.edu/safety/lab/safetytraining> sign in to the on line course system and take the dark room safety course. Training records will be maintained online when courses are completed.

It is recommended that anyone working in a darkroom also attend these additional classroom trainings:

- Fire Safety Training
- Emergency Response for Lab Workers Training.

LIMIT ACCESS TO DARKROOM

Only people who have taken the online Darkroom Safety training should be allowed to perform any work in the darkroom. Maintain control of the keys to the darkroom to ensure that only approved people have access to the darkroom.

SAFETY IN THE DARKROOM



SAFETY EQUIPMENT

Inventory your safety equipment before you begin. At a minimum, the darkroom should have the following items:

- Fire extinguisher
- Spill Kit(s): with signage showing their location
- Safety goggles, enough for each person using the darkroom
- Nitrile, Neoprene (best for acids/bases) or Rubber Gloves
- Tongs
- Hazardous waste handling & pickup info
- Darkroom Safety Guide & Laboratory Safety Manual

Eye Protection

All persons in the darkroom (including visitors) must wear safety glasses at all times, even when not performing a chemical operation. Safety goggles, not safety glasses, shall be worn whenever chemicals are being poured.

Gloves

Nitrile gloves should be worn at all times when working near chemicals. Latex gloves Do not provide reliable protection because they tend to leak easily. Check to ensure there are no cracks or small holes in gloves before each use. Prior to leaving the work area, gloves should be removed to prevent the spread of chemicals. Only gloves approved for the use with darkroom chemicals shall be used.

Clothing

As in any chemical area, clothing in the darkroom should offer protection from splashes and spills. Clothing should be easily removable in case of accident. High-heeled, sandals, open-toed shoes or shoes made of woven material should not be worn. Shorts and miniskirts are also inappropriate when working near chemicals.

MATERIAL SAFETY DATA SHEETS (MSDS)

Material Safety Data Sheets (MSDS) provide specific chemical safety information for the chemicals you are working with. They can be found online at:

<http://www.uvm.edu/safety/art/msds>

or <http://sprintsystems.com/msds-safety/> or in the Laboratory Safety Notebook hanging on the wall outside the dark room.

CHEMICAL SAFETY



CHEMICAL INVENTORY: The dark room supervisor is responsible for determining what chemicals are present in the darkroom. Federal and state regulations require UVM to maintain accurate chemical inventory records. An accurate list of chemicals should be submitted to the UVM Risk Management & Safety website site at <http://www.uvm.edu/safety> in the beginning of each semester. The chemical inventory should include the chemical name and approximate total quantity.

ORDER ONLY WHAT YOU NEED

Before ordering new chemicals, review your current inventory and use those chemicals first. Although chemicals are usually cheaper when purchased in large containers, when the actual usage, storage and disposal are factored in, the cost savings diminish significantly. In addition, chemicals in large containers that are not used frequently can be rendered useless in time by contamination or degradation. The most important step you can take in knowing what you have on hand is to maintain a running inventory of chemicals present in your darkroom.

HANDLING DARKROOM CHEMICALS

- ALWAYS use a water rinse between developer and stop bath
- ALWAYS discard stop bath solutions that have been contaminated with developer.
- ALWAYS add acids to water, not water to acids.
- ALWAYS cover all baths when not in use (to control release of toxic vapors).

STORING CHEMICALS

Storing chemicals properly includes:

- proper and clear labeling
- write date of arrival and
- proper placement of the chemical bottles (off the floor) in secondary containers
- compatible storage containers
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Improperly stored chemicals can result in the following dangerous conditions:

- Release of potentially toxic vapors
- Degraded containers that allow chemicals to become contaminated.
- Degraded containers releasing vapors that can affect the integrity of nearby containers.
- Degraded labels that result in generation of unknowns.

Proper storage of chemicals means:

- Initials of the Responsible Party should be written on all containers.
- Older chemicals should be used first.
- Chemicals must be properly segregated by hazard type.
- All containers must have lids on at all times (except when pouring).
- Chemicals should never be stored above eye level.

CHEMICAL WASTE DISPOSAL

All spent silver fixer is to be poured into the Silver Recovery Processing Unit, located on the floor in the darkroom. This unit is connected to the regular sink disposal drain that goes to the Burlington sewer. The filter in the silver recovery unit removes silver from the fixer and must get changed once per year, based on the current estimated amount of fixer running through it per year. Safety staff (656-5404) coordinate the changing of the filter with the unit's manufacturer.

Any other old and unused chemical waste must be properly disposed of through the campus Laboratory Waste Management program. For more info regarding waste disposal procedures see: <http://www.uvm.edu/~esf/wastedisposal/chemwaste.html>

Serious fines can occur if hazardous waste is disposed of improperly. Never pour waste down the sink without getting "Sink Disposal" approval from Environmental Safety. Current Sink Disposal approvals for the darkroom are located in the Laboratory Safety Manual.

PRACTICE GOOD HOUSEKEEPING

A clean darkroom is generally a safe darkroom. Don't let trash accumulate, clean the tabletops and sweep the floors on a regular basis. All chemicals shall be stored and labeled appropriately. Secondary containers should be placed under all chemicals in storage.

CHEMICAL ALTERNATIVES

There are less-hazardous substitutes for hazardous chemicals used in darkrooms that can be substituted satisfactorily in many cases.

Chemical/Alternatives:

- Developer / Phenidone
- Stop Bath / Dilute solution of acetic acid (rather than concentrated acetic acid)

HAZARDOUS WASTE

As a chemical user, YOU have a legal and moral responsibility to ensure the proper disposal of any hazardous waste you generate. There are various state and federal penalties that can result from improper disposal of these wastes. In addition to potential citations, fines and imprisonment, improper waste disposal can also result in national media attention and damage to the University's reputation.

SPILL PROCEDURES



For minor spills: spills less than 1 liter

Use the Spill Kit provided by Environmental Safety. Begin the cleanup immediately by using the proper personal protective equipment (PPE) such as gloves, goggles, etc.

1. Use the chemical absorbent grey pads provided in the Spill Kit. Never use paper towels on an acid spill; the resulting chemical reaction has the potential of causing a fire.
2. Allow the spilled chemical to absorb into the grey pad.
3. Place the wet pad (spill debris) into the ziplock bag provided in the Spill Kit.
4. Wipe down the contaminated surface with soapy water and a sponge and place all debris (gloves too) used in the Ziplock bag.
5. Seal the bag and label it with a "Laboratory Waste Tag" provided in the Spill Kit. Fill the waste tag out fully and enter it online at: http://esf.uvm.edu/tags_entry/

In the event of a MAJOR chemical spill:

A major chemical spill is any spill involving more than 1 liter of chemicals, an unknown chemical or a small quantity of a high hazard chemical

Follow the instructions below for a Major Spill:

1. Protect yourself and others by evacuating the room
2. If the spill is spreading, evacuate the floor and/or building
3. From a safe place, report the spill by dialing 911
4. If you can, put up a "Spill in Progress. Do Not Enter" sign & limit access to the spill area
5. Stand by from a safe place until help arrives. Emergency personnel will need information from you regarding the spill.

When reporting a spill, you will be asked for the following information:

- Where the spill occurred (building and room number)
- The materials involved (SPELL CLEARLY and SLOWLY)
- The amount spilled
- Any immediate actions you took
- How the spill occurred (if you know or can guess)
- Who first observed the spill and at what time
- If there are any injuries
- A call back number (if available)