

CU BOULDER ORGANIC LAB SAFETY

This document outlines the “what-to-do” aspects of the dress code and practices required of organic chemistry students in the labs. Despite intentional experimental design using limited quantities of dilute reagents and straight-forward, well-tested techniques, risk is inherent in any chemistry laboratory. Students are expected to adhere to the following policies and practices (as well as others in the lab manual) and to be active in risk mitigation by being mindful of their actions at all times. Ultimately each student is responsible for their own safety by working carefully and being aware of possible hazards. If a TA, faculty member, or staff member deems a student’s behavior or dress to be a deterrent to safely working in the lab, the student will leave the lab until the safety risk is resolved.

In the event of an incident, the TA should notify the Lab Coordinator as soon as possible and determine the appropriate action to be taken. The Lab Coordinator will notify EH&S at 2-5522 in a timely manner.

DRESS CODE

A critical component of safety in the lab is the dress code. It must be consistently and correctly applied in order to be effective and instructions on what to do if a contamination occurs must be followed.

LAB COATS

- Lab coats must be worn whenever a student or TA is in a designated lab space, regardless of the planned activity. To avoid possible contamination from the desktop or cabinet fronts, lab coats are required even if the lab is dry or the space is being used for non-lab activity (e.g., recitation).
- Coats can be purchased in the CU Bookstore.
- Coats must fit well and not be too large or too small so as to not protect the wearer from contamination or create a hazard.
- Coats must be on and properly worn so as to protect the users before any work or activity begins at the lab bench.
- If a spill occurs on a coat, the student must immediately contact the TA. Guidance will be provided for handling the clean-up, which can include wiping the area with a Kimwipe, rinsing with the drench hose or disposing of the coat. If needed, the student can use a loaner lab coat provided by the stockroom.
- If a coat has holes or tears, the student must replace it.

GOGGLES

Splash-proof chemical goggles must be worn whenever glassware or chemicals are present!

State law requires that every student, instructor and visitor in a chemistry lab where experiments or demonstrations are being performed must wear industrial quality eye protective devices.

Approved eye protection for people handling glassware and chemicals must prevent both chemical splashes and flying particles (e.g., from broken glass) from entering the eye. The minimum eye protective devices that meet these requirements are goggles that seal to the face and have hooded ventilation ports, not simply safety glasses. This is the required eye protection in organic chemistry labs regardless of eye protection permitted in other labs on campus.

GLOVES

- Disposable gloves are required for all wet labs.
- Recyclable gloves are provided by the department and are available in each lab.
- The TA will demonstrate the proper way to put on and take off the gloves; posters are attached to the bulletin board in each lab explaining the steps involved.
- Gloves are disposed of according to usage:
 - If there is no contamination, the gloves are to be placed in the designated recycling container.
 - If the gloves are contaminated with a caustic liquid or other hazardous chemical the gloves will be placed in the designated solid waste containers located in the fume hoods.

PERSONAL CLOTHING

Ideally, clothing worn under the lab coat or not covered by the lab coat should be made of cotton or other natural fibers and be easy to remove quickly in case of a chemical spill. Any exposed skin is vulnerable to chemical splashes, so as much skin as possible should be covered.

It is recommended that students have designated lab clothing that meet the criteria below and that these items be brought to lab. Storage in the lab or lab drawers is not possible.

Shirts and Tops

With the required use of lab coats, the CU Lab Dress Policy does not specifically address covering the upper torso. However, students should be encouraged to wear appropriate clothing under the lab coat. A shirt or blouse is recommended, ideally long sleeves that don't hang below the lab coat cuffs. Students should be aware that in the event of an incident that necessitate the removal of the coat, they want to be covered appropriately so as to be protected until another coat can be provided. This would then preclude the wearing of shirts with cutouts or holes, off the shoulder garments, etc.

Pants

- Since a portion of the leg is not covered by the lab coat, the dress code specifically addresses pants and shoes and must be adhered to.
- Pants must cover the legs from the waist to the tops of shoes.
- Pants must cover all skin – no holes or tears.
- Pants need to be long enough so that the ankles are not exposed.
- Leggings (skintight stretchy fabric) are NOT PERMITTED.
- Students with medical devices that only fit over bare skin or leggings (such as a knee brace) may be provided with scrubs at no charge from the stockroom for use during lab.
- Maxi skirts are permissible provided they cover to the tops of shoes and don't create a tripping hazard.
- Students without appropriate pants may purchase disposable pants from the CU Bookstore.

Shoes

- Closed toe shoes are required and must cover the entire foot. Shoes with openings or holes (e.g. Crocs, sandals), shoes that do not cover the top of the foot (e.g. ballerina flats), or shoes that do not cover the heel (e.g. clogs) are not permitted.

- Shoes must be high enough to meet the bottom hem of pants when standing.
- If pants ride up when sitting, socks must be worn to cover exposed ankles. Socks are not a substitute for shoes or pants; shoes and pants must cover all skin when standing.
- Shoe covers may be purchased from the CU Bookstore; the shoe covers must still meet the bottom hem of pants.
- Shoes with full leather uppers for maximum protection are recommended.

Hair

- Long hair must be tied back or otherwise restrained so that it does not dangle or drag in chemicals.

Clothing and Hanging Jewelry

- Clothing and hanging jewelry which might dangle or drag in chemicals or interfere with visibility are not allowed in the laboratory.

NOTEBOOKS, PENS, CALCULATORS and PHONES

Notebooks, pens, calculators and phones must also be protected while working in the lab. The work bench should be inspected for cleanliness prior to placing any personal items on it. If cleaning is required, the student should do so with gloved hands and dispose of the gloves as detailed above.

Notebooks

- If chemicals are spilled on the notebook, the contaminated page(s) must be removed and disposed of in the designated solid waste container.
- If the entire notebook suffers a spill, the student should contact the TA who can dispose of it correctly.

Pens

- When not wearing gloves, students may use their own pens for recording data and observations and doing calculations.
- When gloves are being worn, students must use the pens provided on the TA desk. These pens are marked and should not be taken home.

Calculators

- Calculators are permitted in the lab. The student should consider storing in a plastic bag and using it through the bag, with or without gloved hands.
- If a bag is used, the bag should be disposed of as solid waste at the end of the lab; the bag should not go home with the student.

Phones

- As a rule, phones are not permitted in the lab.
- However, there are some labs that require an outside light source (flashlight) or time keeping device. In those cases, the same precautions exercised for calculators should be applied to phones.