

MCDB4100: LABORATORY SAFETY GUIDELINES

Dress code for the lab session

Exposed skin is a risk for contact with hazardous materials. For your protection, you must dress properly for each laboratory session.

No open toed shoes. Wear closed-toed shoes.

Confine long hair, loose clothing and jewelry.

No shorts or short skirts. Wear long pants or long skirts covering down to ankles. Wear long sleeved shirts that fully cover your torso. A properly sized and styled lab coat will reduce these clothing restrictions.

You will be wearing Personal Protective Equipment (PPE): a lab coat, nitrile gloves and safety goggles. These serve to:

- a) protect you from hazardous factors.
- b) protect your samples from you (e.g. your skin and secretions have RNases and microbes).
- c) protect the environment from contamination (by discarding the gloves, leaving the lab coat and goggles in the lab).

Absolutely, NO food or drinks in the lab. No chewing gum or putting on cosmetics. These rules aim to prevent accidental ingestion of hazardous material.

Keep your hands away from your face and mouth. Wash your hands often. No mouth pipetting.

No use of cell phones or headsets in the lab.

Do not touch your lab notebook or other non-experimental items until you remove your gloves.

Keep your bench clean and tidy. Always clean up the bench before you start your experiments and after you finish.

Dispose of all waste properly. Do not place hazardous materials in the regular trash or sink.

Report any accident and injury to Dr. Birsoy or Dr. Klymkowsky.

Wash your hands before leaving the lab.

Know what to do in case of an emergency.

In case of a spill of large amounts of highly hazardous material

Life safety first

Evacuate immediate area

Pull Fire alarm

Execute 911 call from safe location

Remain available for Emergency Personnel

In case of a small spill on the bench or floor

Notify instructors immediately.

Make sure you are wearing PPE when you soak up the spill using paper towels.

Dispose of the paper towels appropriately.

If there is broken glass, do not touch the glass. Use broom and dust pan to collect the pieces and discard them into the "glass waste" container.

Discard gloves.

Wash hands thoroughly.

In case of a spill on clothing or contact with eyes, mouth or skin.

Notify instructors immediately.

Remove your lab coat.

Discard your gloves.

Wash affected area with soap and water for at least 15 minutes. Eyes must be washed in the eye

wash by keeping your eyelids open.

Clean the spill after contact exposure has been completely removed.

Seek medical care as necessary.

Report to Biosafety Officer with an accident report.

In case of a cut or skin puncture with sharps (e.g. broken glass, glass capillaries, needles, etc)

Notify instructors immediately.

Remove your lab coat.

Discard your gloves.

Wash affected area with soap and water thoroughly.

Apply first-aid as necessary.

Report to Biosafety Officer with an accident report.

Location of the eye wash station in B425 (see floor plan on the next page)

When entering the lab through the first door (closer to the B436 lecture room), you will see the eye wash on the left by the sink.

In case of an chemical splash to the eyes, ask for assistance to get to the eye wash station.

Keep both eyes open with each hand and wash and rinse with running water for 15 minutes.

Report to your instructors.

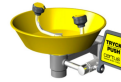
Location of the shower (see floor plan on the next page)

If you need to use the shower in case of a spill, you will need to go to the hallway and walk away from the lab and the lecture room. The shower will be at the corner of the first left turn. Pull the lever to start running water.

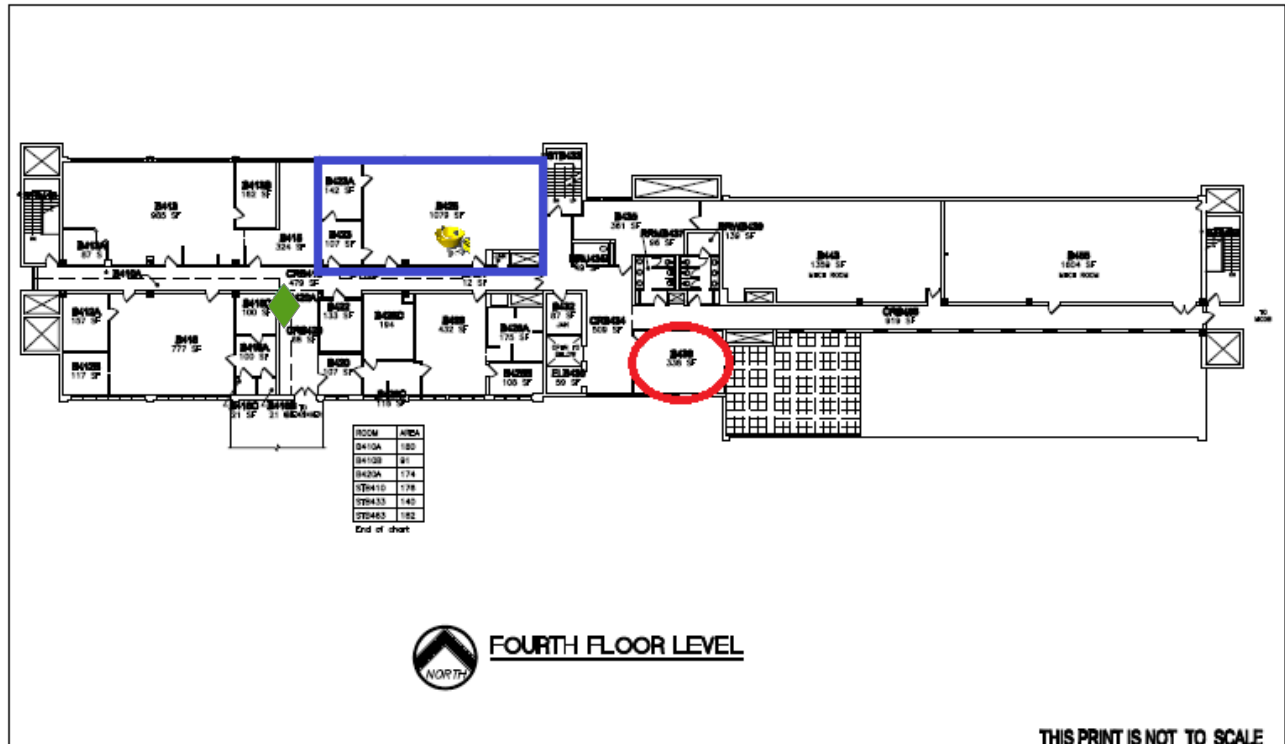
Blue rectangle: B425 Klymkowsky laboratory

Red oval: B436 Lecture room

Eye wash station on the left of the first door into the lab



Green diamond: Shower



THIS PRINT IS NOT TO SCALE

REVISIONS
06/26/08 SHW IMPROVE LAYOUTS, PLUMBING, US SCALE
06/26/08 SHW ADD THE CHILLER AREA TO THE PLAN
07/24/08 SHW REV. ADD 435 374-377
11/27/08 SHW ADD SURVEY POINTS
07/25/09 SHW ADD SURVEY POINTS



Building Name: PORTER BIOSCIENCES BUILDING
 Address: MAIN CAMPUS
 Phone: 303-492-5511



FOURTH FLOOR	BUILDING NUMBER	SHEET
FLOOR LEVEL	373N	6
FLOOR REST ROOM	PORT	8
BUILDING REST ROOM		

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Hazardous materials and other potential hazards in the lab:

Biological: non-pathogenic *E. coli* (BSL-1: no known health risk)

Chemical:

Recombinant or synthetic Nucleic Acids (rsNA)

Ethidium Bromide (EtBr)

Formaldehyde (FA)

Methanol (MeOH)

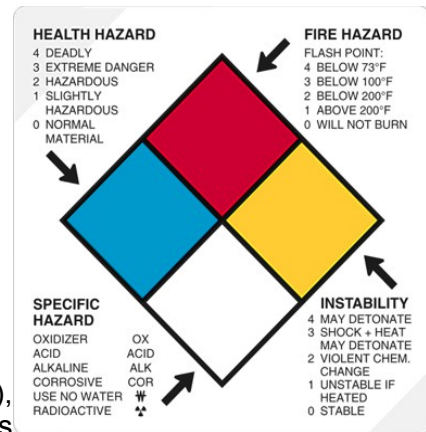
Ethanol (EtOH)

Phenol

Chloroform

Hydrogen peroxide (H₂O₂)

Physical: Sharps, Fire (bunsen burner), Electrical (electrophoresis), High pressure gas cylinder, Aerosol and splash risks with centrifuges and pipetman



For all the hazardous chemicals, we will go over their Material Safety DataSheets (MSDS)

<https://www.osha.gov/chemicaldata/>

Waste Disposal

Always read the label on the waste container and dispose of waste accordingly.

Gloves contaminated with bacteria go into biohazardous solid waste container.

Gloves contaminated with hazardous chemicals are discarded depending on the type of hazardous material. Follow labels.

Glass uncontaminated with any hazardous materials: Uncontaminated Glass trash

Glass contaminated with hazardous materials: Contaminated glass containers

Serological pipettes and micropipette tips are considered sharps. They will be disposed of into puncture proof cardboard boxes depending on the type of hazardous material. Follow labels.

The following hazardous chemicals will be collected according to physical state of the contaminated item (e.g. solid, liquid, gel). Follow labels and ask your instructors when in doubt.

Ethidium bromide

Ethanol

Methanol

Phenol

Chloroform

Abbreviated Lab Rules

Good Lab Practices ensure the uniformity, consistency, reliability, reproducibility, quality, and integrity of your experiments and safety of you, your friends and your things.

- A) **STOP** and **ASK** if you are uncertain of ANYTHING.
- B) **NO FOOD or DRINKS** in the lab.
- C) Follow the **dress code** and all **safety** rules and guidelines.
- D) Keep your **bench clean and tidy**.
- E) **Wash hands** frequently.
- F) **STOP** and **ASK** if you are uncertain of ANYTHING.

Before each lab session, you will

- 1) Meet in Room B436.
- 2) Receive your lab notebook from your instructor.
- 3) Using a pen, write down what you will be doing in the lab session in your lab notebook.
- 4) Form groups as instructed and move to the lab (B425) to start the lab session.

At the beginning of each lab session, you will

- 1) Put away any food, drinks, cell phones and mobile devices, backpacks in the designated area. You will need to leave the lab to access these or wait until the end of the lab session.
- 2) Wash and dry your hands.
- 3) Put on a pair of gloves.
- 4) Put on safety goggles.
- 5) Put on a lab coat.
- 6) Clean your bench.
- 7) Get lab reagents and supplies ready.
- 8) Follow instructions and carry out your experiments.

At the end of each lab session, you will

- 1) Put away all your reagents in the appropriate location (freezer, refrigerator or incubator, etc).
- 2) Discard of any waste appropriately.
- 3) Turn off the burner and any non-essential equipment.
- 4) Clean your bench.
- 5) Take off your lab coat.
- 6) Take off your safety goggles.
- 7) Discard your gloves.
- 8) Wash and dry your hands.
- 9) Take all personal belongings with you and proceed to B436.
- 10) Go over notes in your lab notebook, make necessary modifications and return your lab notebook to your instructor.

If you need to leave the lab during a lab session for any reason, you must

- 1) Let your instructor know that you need to leave
- 2) Take off your lab coat.
- 3) Take off your safety goggles.
- 4) Discard your gloves.
- 5) Wash and dry your hands.