

## WPP Lab Safety QuickGuide

The full version of WPP's *Lab Safety Plan for WPP Operations at 8 New Bond Street, Worcester, MA* (CN# 000.36) is posted at the entrance door to the labs and online at <https://massgov.sharepoint.com/sites/DEP-BWR/SOP>.

**IN CASE OF EMERGENCY CALL 911** – *then* contact the CERO Front Desk Coordinator (Kara Rodwell 508-767-2870) if you are in the building. As soon as practical, contact the Health and Safety Officer (Sue Flint 508-688-5062), and Monitoring Section Chief (Shervon De Leon 617-780-1074).

### Rules

CATEGORY	RULE
Hygiene	No food or drink (including coffee, water, etc.) in any of the labs
	No “kitchen” uses (such as dishwashing, dirty dish storage, etc.)
	No non-work-related items in refrigerators and freezers
	Wash hands before leaving lab areas after working with “dirty” equipment (e.g., boots potentially tainted with poison ivy oil) or samples (e.g., waterborne contaminants such as bacteria).
	Use good judgment in the use of personal protective equipment, such as aprons, gloves, safety glasses, in lab areas. Remove protective items when exiting the lab.
	Wear covered shoes (no sandals) in the lab
	Always use pipette bulbs or manual/automatic pipettors to add liquids to pipettes; never pipette by mouth. Nothing should be brought to your mouth while in the labs.
	Staff are encouraged to keep current on their medical immunizations against diseases, such as tetanus, typhoid, rabies, and hepatitis A, that can be contracted in the field or via contact with contaminated water.
Cleanliness	Keep labs in clean, working order by performing cleaning when needed, and taking responsibility for cleaning up after yourself, so that the area is clean for the next activity.
Sample management	Dispose of un-needed samples in a timely and appropriate fashion.
	Make sure all samples to be stored are labeled in sufficient detail (ID#, project, date, etc.).
Chemical management	Do not store samples or chemicals of any kind (especially flammable materials) in <u>non-lab office areas</u> .
	Do not bring any new reagents into WPP labs without the prior notification of the Laboratory Health and Safety Officer (including providing a Safety Data Sheet).
	Properly discard of expired reagents, except those that may be used for rinsing procedures.
	Safety Data Sheets (SDSs) (formerly MSDSs or Material Safety Data Sheets) binders shall be kept complete, current and in their designated location at all times.
	Take care when using sealed ampules containing reagents/chemicals. Wear gloves and hold ampule firmly with two hands and push with both thumbs away from you to break container at the base of the neck.
Accidents	Communicate all accidents (including “near misses”), incidents and concerns (including observations of non-conformity to this Plan) to WPP's Health and Safety Officer and/or a supervisor as soon as possible.
Ingress/egress	Keep access to doorways and safety equipment clear at all times
	Avoid working alone in the building, especially when using hazardous materials.

CATEGORY	RULE
	Non-WPP users of the lab (e.g., CERO staff) shall coordinate with appropriate WPP staff for all planned uses of WPP lab facilities.
<b>Signage</b>	Do not remove any safety and procedural signage without prior approval
<b>Fume hoods</b>	Use ductless fume hoods for intended purposes only (not as a storage area). Maintain hoods free of all other materials. Make sure the hood is “ON” when in use.
	When working with hazardous materials (e.g. acetone, 2-propanol), work as much as possible inside a fume hood. If not possible, work nearby the fume hood in order to use it as a temporary storage (satellite) area for the material while it is being used.
<b>Packing for transport</b>	Always secure loads when transporting equipment and materials in vehicles and on carts, especially for hazardous materials (such as gasoline) to prevent spillage and sparks.
<b>Flammables storage</b>	Always return hazardous materials to approved flammables storage cabinets when done working with them.
<b>Waste management</b>	Pack waste for transport (e.g., E. coli waste going to WES) in an inner bag (at least 4mm thick) and a sturdy outer container. Acid waste (e.g., spent vials) should be backed with some absorbents.
	Do not dispose of any hazardous, toxic, acidic, caustic or otherwise harmful (e.g., high concentration, primary phosphorus standards) down the drain. If in doubt, consult the LHSO or a direct supervisor.
	Maintain records for volume of hazardous waste generated monthly.
<b>Procurement</b>	Carefully plan purchases of new materials based on how much will be needed and when it will be needed, in order to minimize the amount of material on hand at any given time.
<b>Hazardous materials</b>	No samples containing, or reasonably suspected to contain, hazardous materials will be accepted by the WPP labs unless a WPP staff member has agreed to receive the sample through a prior arrangement. The staff member receiving the sample must submit documentation of how the sample will be handle, stored, and disposed of in a safe manner consistent with the lab SOP, VSQG registration, and applicable regulations.
	No sample reasonably suspected to contain asbestos may be accepted by the lab.
	Biological samples in formalin will not be accepted by the WPP labs; except that algae samples with M3 reagent (which contains formalin) and fish specimens fixed in formalin and transferred to alcohol may be accepted
	See lab-specific requirements related to storage and disposal of potentially “contaminated” samples (water, soil or sediment that have been collected from suspected contaminated areas.

## Resources

Lab Safety Stations are located just inside each lab with a first aid kit, and Safety Data Sheets (SDS) for the chemicals used in the lab.

Phone: there is a landline in the instrument lab next to the computer for use in case of emergency. This phone also automatically alerts the CERO front desk when 911 is dialed.

Emergency Shower and Eye Wash Station is in the prep area (Room 119).

To use the Emergency Shower/Eye Wash Station:

- 1) Shower: Stand under shower and pull handle. Stay in the running shower as long as needed, or until the affected person can go or be taken to the restroom for additional showering/ cleaning. Push handle back up to turn water off.

- 2) Eye-Wash: Depress handle to activate water flow and place face over eye wash basin so that eyes are flushed thoroughly. Use as long as needed.

Fire Extinguishers: the lab areas have three larger-volume fire extinguishers (just out the main lab door, just inside the door from the loading dock and in the hall between labs) and small extinguishers in each room. In case of a fire:

- 1) Notify co-workers immediately (if possible), pull the fire alarm, and call 911
- 2) Hold the fire extinguisher upright and pull pin
- 3) Aim at base of fire at a distance of about 6 feet
- 4) Squeeze level and sweep spray across fire (NOTE: spray will only last a short time depending on size of extinguisher, ranging from 8-25 seconds)

Sorbents: Baking soda is available to neutralize acid spills in the safety station next to the hood in room 117. Absorbent pads are available in the hood in room 119 (the prep area).

PPE: the following person protective equipment is available for use: gloves (various types), safety glasses, lab coats/aprons, boots, waders, safety vests, ear muffs/plugs, hard hats, and face masks.

Safety glasses **must** be worn when handling chemical/biological hazards (e.g., using acetone, transferring acids). Use the appropriate glove for handling chemical/biological hazards (check the packaging for glove material). Lab coats should be worn when handling chemical/biological hazards.

Glove Material	Appropriate Uses
Vinyl/latex	General uses, non-hazardous liquids, inorganic acids/bases, ambient samples
Polyethylene	ambient samples
Nitrile	organic chemicals/solvents, acetone, acids, caustics
Rubber (insulated)	most acids, salts, caustics, alcohols, non-hazardous liquids, electrified ambient water (electrofishing)

## Hazardous Materials

WPP staff currently work with **several materials that are considered hazardous, toxic or of concern** (Note: no acutely hazardous chemicals are used by WPP). These are as follows:

Material	Purpose	Hazard
100% denatured reagent alcohol (5% methanol, 5% isopropanol & 90% ethanol)	Preservation of benthic macroinvertebrate samples	Flammable
Reagent grade acetone	Chlorophyll <i>a</i> analysis	Flammable
Gasoline	For surveys involving the use of boats and backpack electroshocker	Flammable
1:3 (v/v) sulfuric acid solution	Sample preservation	Acid
1:1 (v/v) nitric acid solution	Sample preservation	Acid
Phosphoric acid	Sample preservation	Acid