



Plant Sciences (CBR) Emergency Guide

PERSONAL INJURY

MEDICAL EMERGENCY: Immediate Procedures

- Remain calm.
- Initiate lifesaving measures if required and if trained.
- Call for Emergency Response/MEDICAL EMERGENCY 9-1-1
- Do not move injured person unless there is danger of further harm.
- Keep injured person warm.

MAJOR* INCIDENT [FIRE OR SPILL]:

*A Chemical, Biological or Radiological Spill is considered MAJOR if it poses an immediate risk of harm to individuals in the vicinity and containment cannot be accomplished by the staff.

Major Incident Immediate Procedures

- Attend to injured or contaminated persons and remove them from exposure.
- Alert people to evacuate the area.
- Call Dept. of Public Safety for Emergency Response.
- Fire 9-1-1
- Chemical, Biological or Radiation Spill 9-1-1
- Close doors to affected area.
- Have person knowledgeable of incident and laboratory remain available to provide information to emergency responders.
- Report spills and exposures to Safety Office (x53960). Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

Chemical Spill in Eyes or on Body:

- Remove contaminated clothing at once.
- Flood exposed area with running water from faucet or safety shower or eyewash for at least 15 minutes.
- Obtain medical attention at University Health Center or other medical facility.
- Report incident to supervisor and the Safety Office (x53960). Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

Minor Cuts & Punctures

- Thoroughly wash injury with soap and water for several minutes.
- Obtain medical attention at University Health Center or other medical facility if there is risk of infection.
- Report incident to supervisor. Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

Deep Cuts & Punctures

- Rinse wound with running water.
- Apply direct pressure if there is significant bleeding.
- Obtain medical attention immediately at University Health Center or other medical facility.
- Report incident to supervisor and Safety Office (x53960). Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

Needlestick or Animal Bite/Stick

- Thoroughly wash injury with soap and water for several minutes.
- Obtain medical attention immediately at University Health Center or other medical facility.
- Report incident to supervisor. Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

FIRE

Notes and Precautions:

A fire emergency exists whenever there is the presence of smoke, when there is an uncontrolled fire or imminent fire hazard in the building or surrounding area, when there is a spontaneous or abnormal heating of any material, or when the building evacuation alarm is sounding.

Only use a fire extinguisher if the fire is very small and you know how to do it safely. If you can't put out the fire, leave immediately and make sure the fire department is called. Total and immediate evacuation is safest.

FIRE EMERGENCY PROCEDURE

- Sound the building fire alarm if it is not already sounding.
- If you pulled the alarm; Call 9-1-1
- Leave the building. Use marked exits. Do not use elevators.
- Do NOT return to the Building unless approval is given by an authorized individual.

Clothing on Fire

[Stop, Drop, Roll]

- Roll person around on floor to smother flame.
- Only drench with water if safety shower is immediately available.
- Obtain medical attention. Call for Emergency Response 9-1-1
- Report incident to supervisor and Safety Office (x53960). Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

RADIATION SPILL

Notes and Precautions:

Spreading of radiation beyond the spill area can easily occur by the movement of personnel involved in the spill or clean-up effort. Prevent spread by confining movements of personnel until they have been monitored and found free of contamination. Perform remedial actions without the assistance of safety personnel only on spills resulting from the handling of small quantities of radioactivity (a minor spill). Major spills must be supervised by the Radiation Safety Officer (see activity limits below).

MINOR RADIATION SPILL

Definition: Minor Spills cause limited exposure. There is no internal or external hazard. The spill is confined to a small area in a restricted area and radioactivity is limited.

- Notify personnel in the immediate area of the spill.
- Confine the spill immediately by placing absorbent paper towels or spill pads over the spill.
- Have all potentially-contaminated personnel stay in one area until they have been monitored and shown to be free of contamination.
- Notify Radiation Safety Office (RSO) (x53985).
- Attempt clean-up only if you have received the appropriate training. Follow RSO's instructions.
- Clean area using standard cleaning agents.
- Dispose of all cleaning materials in radioactive waste container.
- Monitor area and repeat cleaning procedure until contamination is completely removed or can no longer be removed.
- Monitor area, hands and shoes for contamination with appropriate survey meter.

MAJOR RADIATION SPILL

- Notify personnel in the spill area.
- Evacuate area, keep fume hoods in operation and turn off oscillating fans.
- Secure/isolate area to prohibit access. Stretch radiation warning tape across all access routes.
- Wear lab coat, gloves and safety goggles.
- Confine or stop source of spill with absorbent paper towels or spill pads.
- Have all potentially-contaminated personnel stay in one area until they have been monitored and shown to be free of contamination.
- Notify Radiation Safety Office (x53985). Follow instructions of RSO. Do not re-enter area until RSO gives approval.
- Have personnel knowledgeable of incident and laboratory remain available to provide information to emergency personnel.

| Definition: A spill is considered "major" when the following conditions exist: | Isotope | Activity (mCi) |
|--|---------|----------------|
| External and/or internal hazard | H-3 | ≥ 10 |
| Large area in a restricted area | C-14 | ≥ 5 |
| Escapes from the restricted area | S-35 | ≥ 5 |
| Greater than listed activities → | P-32 | ≥ 2 |
| Greater than 5 mr/hr at 1 meter | I-125 | ≥ 1 |
| | Other | ≥ 1 |

Spill of Radioactive Material on Body

- Remove contaminated clothing.
- Rinse exposed area thoroughly with water (eyewash for 15 min if eye exposure).
- Obtain medical attention at the University Health Center or other medical facility.
- Report incident to supervisor and RSO (x53985). Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

Burns from X-Ray Machine

- Shut off machine-**DO NOT** alter machine configuration until inspected by RSO (x53985) and Electronics Technician.
- Obtain medical attention at University Health Center or other medical facility.
- Report incident to supervisor and RSO (x53985). Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's

Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

CHEMICAL SPILL

Notes and Precautions:

The nature and quantity of hazardous substances used in laboratories require preplanning to respond safely to chemical spills. The clean-up of a chemical spill should only be done by knowledgeable and experienced personnel. Spill kits with instructions, absorbents, protective equipment and disposal bags and labels should be available to clean up minor spills. A minor chemical spill is one that the laboratory staff is capable of handling safely without the assistance of the Safety Office (x53960) or emergency personnel. All other chemical spills are considered major.

All laboratories utilizing hazardous chemicals must have standard operating procedures (SOPs) that address chemical spill response actions. The SOPs must identify appropriate response equipment, procedures and limitations.

MINOR CHEMICAL SPILL

- Alert people in immediate area of spill.
- Wear protective equipment including chemical splash goggles, appropriate gloves and lab coat.
- Avoid breathing vapors from spill. (Individuals using respiratory protection must comply with requirements of the Respiratory Protection Program.)
- Confine spill to small area. Use appropriate spill kit to absorb the spilled material.
- Bag cleanup material and label it with a Hazardous Waste label. Place cleanup materials in the Hazardous Waste storage cabinet.
- Clean spill area with water.
- Call Safety Office for advice as needed at x53960.

MAJOR CHEMICAL SPILL

- Attend to injured or contaminated persons and remove them from exposure.
- Alert people in the laboratory to evacuate.
- If spill is flammable, turn off ignition & heat sources, evacuate area, activate fire alarm.
- Close doors to affected area.
- If spill or its vapor migrates outside of laboratory to other occupied spaces, activate building evacuation alarm.
- Call Chemical Spill Emergency Response Number at 9-1-1
- Have person knowledgeable of incident and laboratory remain available to provide information to safety and emergency personnel.
- Report spill to supervisor and Safety Office (x53960).

Chemical Spill on Body

- Flood exposed area with running water from faucet or safety shower or eyewash for at least 15 minutes.
- Remove contaminated clothing at once. Avoid contact with eyes. Put in a plastic bag and seal it.
- Make sure chemical has not accumulated in shoes or under jewelry.
- If no visible burn, check MSDS to determine if delayed effects may be expected.
- Obtain medical attention at University Health Center or other medical facility even for minor chemical burns.
- Report incident to supervisor and Safety Office (x53960). Injured employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.

BIOLOGICAL SPILL

Notes and Precautions:

A spill kit should be kept in each laboratory where work with microorganisms is conducted. Basic kit equipment are; appropriate disinfectant, paper towels, rubber gloves, autoclave bags, sharps container, and forceps to pick up broken glass. For any biological spill, first notify others in the laboratory so they will not unknowingly spread the contamination.

For spills of a large volume, or spills of organisms transmitted by inhalation when aerosolized (research involving microorganisms in BSL-3 facilities) call for Emergency Response 9-1-1

Spill of any material associated with human disease, including human blood or tissue, that could be transmitted to lab workers by contamination through auto-inoculation, ingestion, or mucous membrane exposure (often in a BSL-2 lab) should be handled in the following manner:

- Wear utility gloves and lab coat. If splashing is likely, also wear goggles and surgical mask.
- Use forceps to pick up broken glass and discard into SHARPS container.
- Cover spilled material with paper towels.
- Carefully pour diluted disinfectant onto paper towels in sufficient quantity to ensure effective microbial inactivation.
- Allow a 30-minute contact period.
- Pick up paper towels and dispose in biohazard waste container.
- Re-wipe spill area with disinfectant.
- Remove gloves and wash hands with soap and water.
- Place all contaminated materials, including Personal Protective Equipment (PPE), into biohazard waste container and autoclave or dispose as biohazard waste.
- Wash hands with soap and water.

Spill of any material associated with human disease that could be transmitted to workers by aerosol exposure by inhalation (often in a BSL-3 lab) should be handled in the following manner;

- Stop work. Do not breathe. Avoid inhaling airborne material.
- Alert others to evacuate laboratory immediately.
- Close doors to affected area.
- Remove contaminated clothing turning exposed areas inward, and place in a biohazard bag.
- Wash hands and other skin contacted areas with soap and water.
- Call for Emergency Response 9-1-1 and notify Supervisor and Safety Office (x53960).
- Do not re-enter laboratory for at least 30 minutes to allow aerosols to disperse.
- Assemble all clean-up materials.
- Put on full PPE including HEPA-filtered respirator, gown, gloves, and shoe covers. (Individuals using respirators must comply with requirements of the Respiratory Protection Program.).
- Cover spill with paper towels or disposable pads. Pour diluted disinfectant onto paper towels, let stand for 30 minutes and wipe up from the edge toward the center.
- Pick up any broken glass with forceps or cardboard and discard into a SHARPS container.
- Pick up paper towels and wipe the area again with an appropriate disinfectant.
- Remove gloves and wash hands with soap and water.
- Place all contaminated materials, including disposable PPE, in a biohazard bag and autoclave.
- Wash hands thoroughly with soap and water.

Biological Spill on Body / Potential Exposures to Research Materials and Infectious Agents

- Remove contaminated clothing, put it in a plastic bag and seal it.
- Vigorously wash exposed area with soap and water for 1 minute (eyewash for 15 min if eye exposure).
- Obtain medical attention at University Health Center or other medical facility. Injured or exposed employees should complete a UMBI First Report of Injury form and fax it to UMBI HR at (410) 385-6345. Supervisors and Witnesses should independently complete a UMBI Supervisor's Accident Investigation form and a UMBI Accident Witness Statement form, respectively.