
1. BI Emergency Procedure Policy – Spills, Hazardous

- a. This policy outlines procedures for hazardous spills. For biological spills, refer to the BI Spill Policy – Biohazardous Spills. For designated substance spills, refer to the specific risk assessment and SOP. For other emergency procedures, refer to all BI Emergency Procedures Policies.
- b. Prior to working with hazardous materials, users should be familiar with the SDS, PPE requirements, and handling and emergency procedures.
- c. Prior to working with hazardous material, in particular designated substances, users should ensure the appropriate spill kit items are available; refer to the SDS.
- d. Users should only clean up minor spills if they are comfortable and if it is safe to do so. Seek assistance from BI staff, or McMaster Security, as needed.
- e. Users must wear the appropriate PPE when working with hazardous agents, and when cleaning up a hazardous spill. Consult the SDS and BI PPE Policy.
- f. Users must notify supervisor(s) and BI staff of hazardous spill occurrences.
- g. Users must complete a McMaster Injury/Incident Report and submit to EOHSS, and provide a copy to BI staff. Medical follow-up may be required.
- h. For disposing of hazardous waste resulting from a spill and its clean up, refer to the BI Waste Disposal Policy – General & Hazardous Waste.

1.1. Hazardous Spill Kit

- a. Each BI laboratory is equipped with a hazardous spill kit, housed in a large yellow tub. Spill kits contain goggles, gloves, absorbent material and tube/sock, and disposal bags. Some BI laboratories have neutralizing agents.
- b. User should be familiar with spill kit and neutralizing agent locations.
- c. Users should not attempt to clean up spills that are beyond the spill kit capacity.
- d. After using items from a spill kit, users must notify BI staff.
- e. BI staff will replace depleted or damaged spill kit items as needed.

1.2. Hazardous Spill Assessment

- a. In the event of a spill, move away from the spill and determine if the spill is minor or major or complex.

1.2.1. Hazardous MINOR spill criteria

- a. The spill amount is safe to clean up.
- b. The spill is easily contained from drains, ignition sources, and incompatible materials and there is NO potential for release into the environment.
- c. There is NO immediate danger to life or health.
- d. There is NO likelihood of fire or explosion.
- e. The appropriate PPE IS available and the user is appropriately fit tested and trained in its use.

- f. The appropriate spills kit and/or neutralizing agents ARE available and the user knows how to use items appropriately.

1.2.2. Hazardous MAJOR OR COMPLEX spill criteria

- a. The spill amount is NOT safe to clean up.
- b. There IS a potential for the spill to release into atmosphere, discharge to sewer, leak into soils or surface water.
- c. There IS immediate danger to life or health.
- d. There IS likelihood of a fire or explosion.
- e. Appropriate PPE is NOT available and the user has NOT been fit tested or trained in its use.
- f. Appropriate spills kit and/or neutralizing agents are NOT available.

1.3. Hazardous Spill Procedure – MINOR Spill

- a. Alert people in area; post signs. Notify supervisor. Alert BI staff.
- b. Ventilate work area, if possible. If needed, use fume hood to capture or direct flow of gasses/vapours.
- c. Eliminate all ignition sources if flammable material(s) is involved. Carefully remove other items or equipment from path of spill.
- d. Consult SDS and don appropriate PPE.
- e. Transfer necessary spill kit materials and neutralizing agents to the spill site.
- f. Contain spill and prevent its spread. Remove padded tube/sock and place around drain(s) to prevent the spill from entering. Dike, block or contain size or spread of spill by using the appropriate absorbent material and/or pads. Work from the outside to the centre of the spill.
- g. Using tools to reduce contact with spilled material (e.g. dust pan and broom), collect and contain the clean-up material(s) into a double poly bag. Label bag with chemical waste label.
- h. Clean affected areas and equipment with water and absorbent pads. Dispose of rinsing waste into the double poly bag.
- i. Dispose of gloves into the double poly bag.
- j. Wash hands well with soap and water.
- k. Dispose of double poly bag containing cleanup materials as hazardous waste. Refer to [BI Waste Disposal Policy – General and Hazardous Waste](#). Consult with BI staff for disposal assistance and to replace depleted spill kit items.
- l. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.

1.4. Hazardous Spill Procedure – MAJOR OR COMPLEX Spill

- a. Alert people in area; post signs. Notify supervisor. Alert BI staff.
- b. Evacuate to safe location.
- c. Pull fire alarm, push panic button or call McMaster Security/Emergency Response (905-525-9140 x88).

- d. Be prepared to provide details of chemical spill (location, amount, copy of SDS and any other potential hazards/chemical mixtures).
- e. Follow steps as given by security or emergency responders.
- f. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.

1.5. Hazardous Spill Procedure – On Body

- a. Immediately wash affected area with water, or use emergency shower, for 15 minutes. Remove contaminated clothing. Avoid modesty. Avoid further contamination of other body parts, especially face and eyes.
- b. Inform supervisor. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.
- c. Seek medical aid as required. Provide SDS to attending physician.

1.6. Hazardous Spill Procedure – In Eye

- a. The BI encourages users to not wear contact lenses in laboratory areas. If substances are splashed in eyes while wearing contact lenses, remove contact lenses immediately.
- b. Flush eyes with water for at least 20 minutes while holding eye open during flushing. Ask for assistance if needed.
- c. Inform supervisor. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.
- d. Seek medical aid as required. Provide SDS to attending physician.

1.7. Hazardous Spill Procedure – Designated Substances

- a. Designated substances should not be stored or used in BI facilities without the proper risk assessment and its review by McMaster health and safety committees. Refer to the [BI Designated Substance Policy](#).
- b. Inform supervisor of designated substance spills. Alert BI staff.
- c. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.
- d. Seek medical aid as required. Provide SDS to attending physician.

1.7.1. Hazardous Spill Procedure – Designated Substances – Mercury

- a. Mercury is a designated substance. Mercury vapours are highly toxic.
- b. Handle spills immediately.
- c. Mercury spill kits are located where mercury is used or stored (ETB 433).
- d. For **minor** mercury spills, follow spill procedures outlined in the risk assessment and accompanying SOPs.
- e. For **major** mercury spills, follow “Hazardous Spill Procedure - Major or Complex Spill” protocol.

1.7.2. Hazardous Spill Procedure – Designated Substances – Silica

- a. Silica is a designated substance

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- b. Crystalline and powdered silica is a designated substance. Silica dust can cause serious damage to lungs and eyes.
 - c. DO NOT DRY SWEEP silica.
 - d. For **minor** silica spills, ventilate the area to remove any airborne dust, moisten the solid with water to obtain a gel, collect the gel, and place into a labeled plastic waste container.
 - e. For **major** silica spills, follow “Hazardous Spill Procedure - Major or Complex Spill” protocol.

1.8. Hazardous Spill Forms

- a. McMaster Injury/Incident Report.