# BI Emergency Procedure Policy – Spills, Hazardous

1. This policy outlines procedures for hazardous spills.
   1. For biological spills, refer to the BI Spill Policy – Spills, Biohazardous.
   2. For other emergency procedures, refer to BI Emergency Procedures Policies.
2. Prior to working with hazardous materials, users must be familiar with the SDS and any risk assessments, PPE requirements, and handling and emergency procedures and ensure the appropriate clean-up items are readily available.
3. Users must wear the appropriate PPE when working with hazardous agents, and when cleaning up a hazardous spill.
4. Users should only clean up minor spills if they are comfortable and if it is safe to do so. They should seek assistance from BI staff, or McMaster Security, as needed.
5. Spills should be cleaned up promptly. For absorbent materials, such as cardboard, that become contaminated in a spill, the material must be disposed of according to the spill type. Seek assistance from BI staff as needed.
6. Users must inform their supervisor, BI staff, and McMaster safety offices of all incident and emergency situations, including spills, via the completion of a McMaster Injury/Incident Report. If the instance involves hazardous or biohazardous materials, attach the SDS/PSDS.
7. For disposing of hazardous waste resulting from a spill and its clean up, refer to the BI Waste Disposal Policy – General & Hazardous Waste.

## Hazardous Spill Kit

1. 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.
2. It is the BI User’s responsibility to be familiar with spill kit and neutralizer storage locations and spill clean up procedures as specified in the SDS.
3. BI Users should not attempt to clean up spills that are beyond the spill kit capacity.
4. After using items from a spill kit, users must notify BI staff. BI staff will replace depleted or damaged spill kit items as needed.

## Hazardous Spill Assessment

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

### Hazardous MINOR spill criteria

1. The spill amount is safe to clean up.
2. The spill is easily contained from drains, ignition sources, and incompatible materials and there is NO potential for release into the environment.
3. There is NO immediate danger to life or health.
4. There is NO likelihood of fire or explosion.
5. The appropriate PPE IS available, and the user is appropriately fit tested and trained in its use.
6. The appropriate spills kit and/or neutralizing agents ARE available, and the user knows how to use items appropriately.

### Hazardous MAJOR OR COMPLEX spill criteria

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

## Hazardous Spill Procedure – MINOR Spill

1. Alert people in area; post signs. Notify supervisor. Alert BI staff.
2. Ventilate work area, if possible. If needed, use fume hood to capture or direct flow of gasses/vapours.
3. Eliminate all ignition sources if flammable material(s) is involved. Carefully remove other items or equipment from path of spill.
4. Consult SDS and don appropriate PPE.
5. Transfer necessary spill kit materials and neutralizing agents to the spill site.
6. 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.
7. 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.
8. Clean affected areas and equipment with water and absorbent pads. Dispose of rinsing waste into the double poly bag.
9. Dispose of gloves into the double poly bag.
10. Wash hands well with soap and water.
11. 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.
12. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.

## Hazardous Spill Procedure – MAJOR OR COMPLEX Spill

1. Alert people in area; post signs. Notify supervisor. Alert BI staff.
2. Evacuate to safe location.
3. Pull fire alarm, push panic button or call McMaster Security/Emergency Response (905-525-9140 x88).
4. Be prepared to provide details of chemical spill (location, amount, copy of SDS and any other potential hazards/chemical mixtures).
5. Follow steps as given by security or emergency responders.
6. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.

## Hazardous Spill Procedure – On Body

1. 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.
2. Inform supervisor. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.
3. Seek medical aid as required. Provide SDS to attending physician.

## Hazardous Spill Procedure – In Eye

1. 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.
2. Flush eyes with water for at least 20 minutes while holding eye open during flushing. Ask for assistance if needed.
3. Inform supervisor. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.
4. Seek medical aid as required. Provide SDS to attending physician.

## Hazardous Spill Procedure – Inhaled

1. Immediately leave the area and seek fresh air. If breathing remains labored, seek medical evaluation (bring SDS). Inform supervisor and BI staff. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.

## Hazardous Spill Procedure – Designated Substances

1. 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.
2. Inform supervisor of designated substance spills. Alert BI staff.
3. Complete an injury/incident report, with SDS attached. Provide a copy to BI staff.
4. Seek medical aid as required. Provide SDS to attending physician.

### Hazardous Spill Procedure – Designated Substances – Mercury

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

### Hazardous Spill Procedure – Designated Substances – Silica

1. Crystalline and powdered silica is a designated substance. Silica dust can cause serious damage to lungs and eyes.
2. DO NOT DRY SWEEP silica.
3. 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.
4. For **major** silica spills, follow “Hazardous Spill Procedure - Major or Complex Spill” protocol.

## Hazardous Spill Forms

1. “Hazardous Spill” sign.