HAZARDOUS WASTE MANAGEMENT

SAFE HANDLING, STORAGE AND DISPOSAL

Including:

E-Waste, Metal Waste and Battery Disposal

Revised: June 2023 (EH&S Officer)

Replaces: Laboratory Hazardous Waste Management Manual, 2010

Contents

1.0 Introduction

Ontario Tech University is committed to the safe, environmentally responsible, management of hazardous waste. This minimizes risk to employees and students and ensures the university is compliant with environmental regulations. Waste Coordinators, as identified in various departments throughout the university, aid in ensuring the protocols presented within this manual are followed.

This manual and the procedures contained herein, apply to all laboratory and other operations that generate hazardous waste in the form of:

- Chemical
- Biological
- Radioactive
- Sharps

Guidelines for handling E-waste, metal waste and used battery disposal are also included.

The objective of this manual is to provide information and instructions to safely and, in an environmentally responsible manner, handle and manage all hazardous waste generated within the campus.

The basic elements of the Hazardous Waste Management Program are:

- Waste minimization
- Packaging requirements
- Labelling requirements
- Storage requirements

The associated waste handling procedures are **mandatory** when preparing waste for disposal. Waste not prepared in accordance to these procedures will not be accepted for disposal.

2.0 Environmental Legislation

The proper handling, transport and disposal of hazardous wastes are governed by a variety of provincial and federal legislation as well as local by-laws. These include:

- **Environmental Protection Act (Ontario)**
  Air Pollution – General Regulation (O.Reg. 346)

Waste Management – General Regulation (O.Reg. 347)
Waste Management – PCB Regulation (O.Reg. 362)

- **Transportation of Dangerous Goods Act (Canada)**
- **Environmental Protection Act (Canada)**
- **Environmental Contaminants Act (Canada)**
  Guidelines for the Management of PCB Wastes
- **Nuclear Safety and Control Act (Canada)**
  Packaging and Transport of Nuclear Substances Regulation
  Canadian Nuclear Safety Commission (CNSC) Regulatory Guides
- **Pest Control Products Act (Canada)**
- **Pesticides Act and Regulations (Ontario)**
- **City of Oshawa By-Law 95-95**
  Storm Sewer By-Law

Effective January 1, 2023, the Ministry moved away from the HWIN system to the new Resource Productivity & Recovery Authority (RPRA) Hazardous Waste Program Registry using the HazTrack app.

3.0 Responsibilities

Waste Generator and Department

It is expected that the waste generator/department supervisor will (**as applicable**):

- Preplan experiments to include provisions for handling of hazardous wastes generated as a result of the activity
- Preplan experiments to minimize the amount of waste generated
- Properly package and label the waste according to the procedures outlined in this manual
- Identify, classify and segregate wastes according to the procedures outlined in this manual
- Safely store the wastes according to procedures outlined in this manual
- Identify to the EH&S Officer, the need for pickup and disposal of hazardous waste
- Safely transport waste to the designated pickup location according to procedures outlined in this manual
- Promptly request disposal of unwanted materials so they do not accumulate
- Arrange to decommission areas no longer producing hazardous waste

Waste Coordinators

Each area generating hazardous waste will identify a Waste Coordinator

It is expected that the Waste Coordinators will (as applicable):

- Act as a local resource to coordinate waste pickup and disposal and provide assistance in interpreting the requirements of this manual and in dealing with unusual wastes
- Receive waste that is properly packaged and labelled and ensure classifications are accurate
- Maintain Transportation of Dangerous good training (TDG)
- Provide EH&S Officer with the required detail by completing and submitting the Hazardous Waste Summary for Disposal document or a similar summary.
- Be able to access the RPRA Registry – check and sign manifests

Environmental, Health and Safety Officer

It is expected that the EH&S Officer or designate will:

- Provide waste generators/handlers with the appropriate procedures for managing hazardous waste
- Arrange for external Waste Management Company to pick up and dispose of hazardous wastes
- Complete necessary documentation required by the Ministry and Waste Management Company
- Provide administrative support for the RPRA Registry
- Maintain TDG training
- Ensure effectiveness and compliance of the Hazardous Waste Management Program to the framework of the Resource Recovery and Circular Economy Act, 2016

4.0 Waste Minimization

There is significant cost associated with hazardous waste disposal. It is therefore important that individuals take all reasonable steps to minimize the generation of hazardous waste. The following should be considered at all times:

Purchasing

- Purchase hazardous materials in the smallest quantities needed and do not stockpile as this often results in excessive disposal cost
- Donations of hazardous materials in bulk (e.g., entire laboratory inventories) should be avoided as receipt of unwanted materials leads to additional disposal costs. Only material that can be used within a year should be accepted.
- Due to regulatory requirements, donations involving radioactive materials or biological agents will require approval from the University Radiation Safety Committee or the Biosafety Committee
- Before purchasing hazardous chemicals, ensure there is a written laboratory procedure detailing the method of disposal of the chemical and any reaction products

Product Substitution

It is expected that wherever possible, consideration be given to substituting products that would result in the generation of hazardous waste with those that would be less or non-hazardous. A few examples are:

- Toluene for Benzene
- A thermocouple or alcohol thermometer rather than mercury

- Non-flammable scintillation cocktails instead of flammable ones
- Short- lived radionuclides instead of longer-lived ones
- Non-radioactive DNA labelling for radioactive DNA labelling

Good Laboratory Practice

- Plan for hazardous waste disposal as part of all experimental protocols
- Record the date of receipt on all containers so that older ones can be used first as part of inventory management
- Avoid storing excess hazardous material
- Ensure all containers are labelled with the proper scientific name. Unused material must follow the WHMIS requirements. Mixed waste materials do not require WHMIS labelling but they must be labelled in accordance with this manual and include the following:
    - Name of generator
    - Building/room number where waste was generated
    - Major chemical constituents with approximate %
    - Noted applicable classification
- **Do not mix** hazardous and non-hazardous waste
- On termination of research projects, ensure all hazardous materials and containers are labelled and those no longer required are disposed of. The principal investigator or researcher should take responsibility for the disposal process of these materials
- **All containers of hazardous material must be identified with the materials they contain. It is extremely expensive to dispose of unknown materials and the associated costs will be charged back to the generator**

5.0 Packaging

Waste materials must be packaged in a manner that will allow them to be safely stored or transported without danger of spillage or explosion.

- Waste must be stored in containers that are compatible with the material. For example, corrosive materials should be stored in glass or plastic containers not metal ones. Hydrofluoric acid must **not** be stored in glass containers.

The detailed requirements for the different categories of waste materials are given in the appropriate sections of this manual.

- Compatible wastes can be stored in the same container with appropriate labelling.
- **Never** mix incompatible chemicals together in a single container. This has the potential to cause heat generation or gas evolution or other reaction and subsequent explosion
- Flammable and Combustible solvents shall be segregated and packaged separately into two categories:

    - **Halogenated** (containing fluorine, chlorine, bromine, iodine)
        - Premium cost for disposal

    - **Non-halogenated**

- Solvent safety cans should be used to collect and temporarily store large volumes (>10-20 L) of flammable organic waste solvents. The generating laboratory is responsible for providing these containers and they will be returned to the laboratory when the material is bulked at the time of waste collection.

Waste is to be safely packaged in approved/appropriate containers and the fill volume is to be **80% maximum.** Containers used should be of appropriate size that would be filled to the 80% requirement within a **3-month** time period and moved to Hazardous Waste Storage location where appropriate.

6.0 Labelling

Waste materials must be labelled in a manner that will allow the hazards to be **clearly** and accurately identified. The generator will assume the costs of identifying any unknown or unlabelled material prior to disposal.

- Waste labels are to be applied to the container as soon as they are put into use to ensure users are aware of the contents
- Chemical names are to be listed rather than abbreviations, acronyms or trade mark names. Vague categories such as "solvent waste" are not acceptable
- An accurate inventory must be maintained of the material being added to each waste container using the appropriate label

7.0 Storage

- Containers must be in good condition and should remain closed unless waste is being added (note **maximum fill is 80%** and container should accommodate waste generated within no more than a 3-month time period)
- Hazardous waste must be stored in a safe, out of the way location in the generator's laboratory or other designated area between collection days
- Flammable, Corrosive or acidic waste must be stored in the appropriate cabinet or room designed for this purpose
- It is not recommended that chemical waste be stored in a fume hood however, if circumstances require that they be stored in a fume hood, they should be limited to small amounts and be kept in a location such that they do not interfere with work in the fumehood or obstruct the airflow and decrease the fumehood efficiency.
- Waste should be segregated according to compatibility groups such as:
    - Acids
    - Bases
    - Flammables
    - Oxidizers
    - Reactive

- Hazardous waste should be removed from the laboratory on a regular basis and not allowed to accumulate
- Liquid hazardous waste containers stored in laboratories should be periodically inspected for leaks or expansion

- Dispose of aging containers promptly. Some chemicals are time sensitive and may degrade into very hazardous by-products. e.g., ethers may degrade to form explosive organic peroxides. Where safety considerations would indicate not waiting until the scheduled collection day, contact the local Waste Coordinator

8.0 Disposal

- Hazardous waste must **never** be disposed of in regular garbage
- Hazardous waste **must not be** flushed down the drain or diluted as a method of disposal. This practice is illegal according to provincial legislation and the by-laws of the Regional Municipality of Durham. It may also lead to dangerous reactions or damage to drainage systems
- The disposal protocols presented in this manual are to be followed at all times

9. Collection Schedules

Collection and disposal will be arranged by the Waste Coordinators as required. For the academic areas, there will normally be at least three scheduled collections per year; at the end of the fall, winter and spring terms.

Regular pick ups for other areas can be arranged as necessary, based on accumulated volumes, to ensure safe storage volumes are not exceeded.

Special pickups outside of this schedule can be arranged through your local Waste Coordinator.

10. Releases to Sanitary Sewer

The following are specifically **prohibited** from discharge to the sanitary sewer system:

- pH less than 6.0 or greater than 10.5
- two or more separate liquid layers
- a temperature greater than 60 degrees Celsius
- total mercury greater than 0.01 mg/L
- acute hazardous waste chemicals
- combustible liquids
- fuel
- dyes or colouring materials which could pass through a sewage works and discolour the sewage works effluent
- hazardous waste chemicals
- ignitable waste
- pathological waste
- pesticides
- reactive waste
- severely toxic waste
- PCBs
- Radioactive waste, unless in accordance with a license issued by the Canadian Nuclear Safety Commission

The following table lists discharge limits into sanitary sewer for a number of parameters as set out by the Regional Municipality of Durham By-law 41-2009.

Note that it is **prohibited to deliberately add water** to the discharge for the purposes of dilution in order to meet these limits.

Limits for Sanitary Sewer Discharge

Parameter	Limit (mg/L)	Parameter	Limit (mg/L)
Biochemical Oxygen Demand	300	Benzene	0.01
Cyanide (total)	2	Chloroform	0.04
Fluoride	10	1,2-dichlorobenzene	0.05
Total Kjeldahl Nitrogen	100	1,4-dichlorobenzene	0.08
Oil & Grease – Animal & Vegetable	150	cis-1,2-dichloroethylene	4
Oil & Grease – Mineral & Synthetic	15	trans-1,3-dichloropropylene	0.14
Phenolics (4AAP)	1	Ethyl benzene	0.16
Phosphorus (total)	10	Methylene chloride	2
Suspended solids (total)	350	1,1,2,2-tetrachloroethane	1.4
Sulphates	1500	Tetrachloroethylene	1
Aluminum (total)	50	Toluene	0.27
Antimony (total)	5	Trichloroethylene	0.4
Arsenic (total)	1	Xylenes (total)	1.4
Cadmium (total)	0.7	Di-n-butyl phthalate	0.08
Chromium (total)	2	Bis(2-ethylhexyl) phthalate	0.012
Cobalt (total)	5	Methyl Ethyl Ketone	8
Copper (total)	3	Styrene	0.2
Lead (total)	1		
Manganese (total)	5	PCBs	0.001
Molybdenum (total)	5		
Nickel (total)	2	Nonylphenols	0.02
Selenium (total)	1	Nonylphenol ethoxylates	0.2
Silver (total)	5		

Tin (total)	5		
Titanium (total)	5		
Zinc (total)	2		

The Regional Municipality of Durham Sewer Use By-Law No. 55-2013

11. Chemical Waste

Chemical wastes are collected for disposal by a licensed Waste Disposal Company as required. The Waste Coordinator is responsible for contacting the EH&S Officer or designate, to identify the need for waste pickup or transfer.

Waste is to be kept in the generating location or designated storage between scheduled pickups unless an immediate disposal is required.

Chemical Compatibility

When preparing chemical waste for disposal it is the generator's responsibility to ensure that incompatible chemicals are not mixed in the same container. The first step in determining chemical incompatibilities is to review the Safety Data Sheet where incompatibilities will be listed in the section on reactivity.

Some general examples are:

- Acid-reactive compounds (e.g., cyanides, sulphides) which liberate gaseous products when acidified should not be mixed with any inorganic acid (e.g., sulphuric or hydrochloric acid)
- Organic acids (e.g., glacial acetic acid) should be segregated from inorganic acids (e.g., sulfuric, hydrochloric, nitric, boric, carbonic, phosphoric). Generally inorganic acids are oxidizing agents while some organic acids may be either reducing agents or combustible
- Water reactive materials (e.g., sodium, potassium) should be kept well away from any water sources.
- Oxidizers (i.e., any inorganic compound that assists fire such as hydrogen peroxide, lead nitrate) should never be mixed with organic materials (e.g., organic bases such as pyridine, aniline, amines, flammable solvents such as toluene, acetone) or reducing agents (e.g., water-reactive chemicals such as sodium).
- Perchloric acid, although an inorganic acid, is a powerful oxidizing agent and should be considered a powerful oxidizer in its concentrated form

12. Special Cases

On occasion some wastes may be generated which require special handling. Contact the local Waste Coordinator to arrange disposal.

Asbestos

Asbestos containing materials such as gloves, heating pads etc. should be placed in a plastic bag, sealed, and marked "asbestos containing waste". Asbestos waste must be managed according to the requirements of Ontario Regulation 347 - General Waste Management under the Environmental Protection Act.

Explosives

Do not handle explosive materials. Examples of explosive materials include trinitrated compounds, dry picric acid (<29% by weight water content), fulminated mercury, heavy metal azides. These materials require special handling for disposal. These materials must be checked frequently for signs of deterioration and aging. Such signs include "sweating" of a container, bulging, crystal formation around the cap. Deteriorating explosive materials are potentially more dangerous to handle than new explosives.

Gas Cylinders

Gas cylinders should be treated as high energy sources. Use the smallest size necessary to do the work. Prior to purchasing, check if empty cylinders can be returned to the supplier. Disposing of gas cylinders is extremely expensive and difficult.

Refer to the Compressed Gas: Safe Storage and Handling Guidelines for further information.

Mercury

All free liquid mercury should be collected in a leak-proof container. Mercury contaminated solids such as glassware, gloves and cleanup materials should be packaged separately.

Peroxidizable Compounds

Peroxidizable compounds should be ordered in small quantities (less than 6 months' supply) and dated when the container has been opened. Even if a commercial inhibitor has been added by the manufacturer, organic peroxide formation can begin within 6 months following exposure to air. Organic peroxides are explosive. The ordering of smaller quantities and the reduction of the volume of these materials in storage encourages the quick turnover of inventory and reduces the likelihood of peroxide formation.

The following materials have the potential to form organic peroxides:

- Ethers such as Isopropyl ether, dimethyl ether, diethyl ether
- Acetal
- Decahydronapthalene
- Dicyclopentadiene
- Diethylene glycol
- Dioxane

Polychlorinated Biphenyls (PCBs)

PCB contaminated material requires special consideration for handling, storage and disposal. In Ontario, any waste material with a concentration of PCBs in excess of 50 ppm is considered to be PCB-contaminated.

Sources of PCBs include transformers containing askarel. PCBs were also used in capacitors, hydraulic equipment, electromagnets, heat transfer equipment and vapour diffusion pumps.

If material is suspected to contain PCBs it should not be mixed with other wastes. For testing of the material, contact the local Waste Coordinator.

13. Biological Waste

All laboratories which manipulate potentially hazardous biological agents and materials, and generate waste containing such agents are responsible for the separation, packaging and treatment of their laboratory waste prior to its removal and disposal. **The following procedures apply to waste contaminated with or containing biological agents *only.***

These procedures apply to any laboratory producing needles, and/or classified as Biological Containment Level 2 or higher. Containment Level 1 labs must render their waste as non-hazardous (autoclave or chemical disinfection) (except if waste includes needles or contains Chemical or Radiation hazards) and afterwards place it directly to the regular waste stream picked up by Custodial staff.

NOTE: any biohazardous labels must be defaced after rendering waste non-hazardous prior to disposal.

The following general principles must be followed with respect to the generation and disposal of biological waste:

- Minimize the generation of hazardous waste by reducing, reusing and recycling where possible
- Segregate biohazardous and non-biohazardous waste at the point of generation
- All biohazardous waste must be rendered harmless by either chemical decontamination or autoclave before disposal
- Steam sterilization is not permitted for laboratory waste contaminated with or containing a combination of viable **biological** agents and significant amounts of hazardous **chemical** or **radioactive** materials

Biological waste includes:

- liquids such as used cell culturing media, supernatant, blood or blood fractions (serum), etc., which contain viable biological agents
- materials considered pathological, including any part of the human body, tissues and bodily fluids, but excluding fluids, extracted teeth, hair, nail clippings and the like that are not infectious
- any part of an animal infected (or suspected to be infected) with a communicable disease
- non-sharp, solid laboratory waste (empty plastic cell culture flasks and petri dishes, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents
- all sharp and pointed items used in medical care, diagnosis, and research, including the manipulation and care of laboratory animals, which should be considered potentially infectious
- laboratory glassware which is known or suspected to be contaminated with hazardous biological agents

13.1 Packaging and Treatment

Materials that are contaminated with hazardous biological agents must be collected in the appropriate containers and sterilized or disinfected before disposal.

a) Liquids containing Biohazardous Agents

- Collect liquids in leak-proof containers such as flasks or bottles.
- Liquid waste containers designed to withstand autoclaving temperatures must be used when steam sterilization is utilized. To allow pressure equalization, they must not be sealed.

b) Solids Containing Biohazardous Agents

- Non-sharp, solid laboratory waste (empty plastic cell culture flasks and petri dishes, agar plates, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents should be disinfected prior to disposal.

  Non-sharp, solid laboratory waste (empty plastic cell culture flasks and petri dishes, agar plates, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents should be disinfected prior to disposal.

c) Sterilization and Disinfection

- When necessary or for safety reasons, inactivate the biological agents by employing either chemical disinfection or steam sterilization procedures.

NOTE: Although chemical disinfectants play a useful role in many situations where decontamination is required, when they are used to sterilize waste, the permit holder must assure the Biosafety Committee that the routines and methods achieve the desired objective.

Refer to the Biosafety Manual for further direction regarding chemical disinfection protocols.

Autoclaving (steam sterilization) is the preferred (and generally regarded as the most reliable) method of sterilizing biological waste. Depending on the volume of waste to be sterilized, it may be necessary to extend the duration of exposure to high temperature steam under pressure.

- Steam sterilization is not permitted for laboratory waste contaminated with or containing a combination of viable biological agents and significant amounts of hazardous chemical or radioactive materials. See “mixed waste” For this mixed waste recommendation see below.
- Containers of liquid waste must be placed into an autoclavable tray or pan of sufficient capacity to contain all liquid in the event of vessel failure or breakage inside the autoclave chamber. Use extreme caution when handling autoclaved liquids since they are hot and may boil over.
- Autoclavable bags of solid waste should be closed but not sealed airtight in order to allow steam penetration before they are placed into the autoclave chamber. After autoclaving and cooling, ensure any biohazard labelling has been defaced.

14. Radioactive Waste

When initiating research, it is important to consider a "cradle to grave" scenario where disposal planning becomes part of the procurement process. In some cases, it may be possible to return material to the source upon completion of the research activity.

Isotope users must follow the basic steps for waste management as presented in the Radiation Safety Manual

Radioactive waste means waste that contains material with radionuclide content above established unconditional clearance levels and exemption quantities (set out in the *Nuclear Substances and Radiation Devices Regulations*) as stipulated in the license conditions. Some forms of radioactive waste found on campus may include include the following:

- surplus radioisotope material in any form (e.g., surplus materials in supplied form, sealed sources, etc.) salts or mixed salts. UF4 salt and ThF4 salt, which may be mixed with other salts. Stored in glovebox.

- material that has come into direct contact with radioactive material (e.g., gloves, culture dishes, pipettes, flasks, etc.).
- materials used for radioactive decontamination (e.g., paper towels, sponges, etc.).
- materials that have come into incidental contact with radioactive material (e.g., bench top covering material, solutions used ford cleaning, tools etc.).
- contaminated equipment used during radioisotope handling procedures that is no longer required and cannot be cleaned (e.g., centrifuges, gel electrophoresis equipment, etc.).

- Steel drum sections (approx. ¾" thick steel) where one side has been exposed to nat-U. Mildly radioactive.

- Multiple containers with solution used to clean tools that were in contact with UF4 or ThF4.

14.1 Packaging and Treatment

In Canada, 4 general classes of radioactive waste are used as the basis of the classification system:

- Low-level radioactive waste (LLW)
  - Very low-level radioactive waste
  - Very short-lived radioactive waste
- Intermediate-level radioactive waste (ILW)
- High-level radioactive waste (HLW)
- Uranium mine and mill tailings

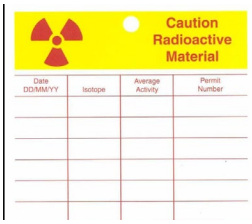
Waste should be classified according to the degree of containment and isolation necessary to ensure safety, with additional consideration given to the hazardous potential of different

classes of waste and the time frame associated with the hazard. (REGDOC-2.11.1, Waste Management, Volume 1: Management of Radioactive Waste)

Radioactive waste should not be stored beneath any working area where possible, whether or not this is used for work with radioisotopes. Radioactive waste stored beneath working areas must be shielded so that the outside of the storage unit/area is below 2.5 uSv/hr or the value set by the license condition (lower value applies). Radioactive waste should not be stored in the vicinity of personnel who do not work with radioactive waste.

Release criteria are outlined in section 8 of the Radiation Safety Manual

Radiation waste logs are to be maintained and the Radiation Safety Officer notified when containers are full or disposal is to be initiated.



15. Mixed Waste (mixtures of biological, chemical and/or radioactive)

Ideally waste is not mixed, however, should this be the case any biological hazard should be inactive first. After disinfection by steam sterilization where possible, it can be disposed of as chemical or radioactive waste.

16. Sharps Waste Management

Laboratories that generate sharp or pointed waste are responsible for the separation, packaging and treatment prior to its removal.

"Sharps" is the term applied to all sharp or pointed items including broken glassware, syringes, needles etc... Clean, broken glassware should **never** be disposed of with regular garbage or regular recycling bins. If clean, it should be collected in the broken glassware cardboard container. If broken glassware is contaminated, if safe to do so, it should be disinfected/cleaned prior to disposal, otherwise it should be managed as hazardous waste.

Biological sharp waste is to be disposed of in the appropriate sharp waste container and removed by an approved medical waste handler.

17. Laboratory and/or Equipment Decommissioning

In order to ensure any equipment being removed from a laboratory for repair or disposal is free from hazards the Equipment Decommissioning Form is to be completed and be secured to the equipment. A copy must be kept by the initiator.

When a laboratory is being vacated or repurposed, steps should be taken to ensure the space is free from any remaining hazards. Any existing permits are to be decommissioned where

appropriate and hazardous waste removed. A hazard and laboratory review should be completed with EHS to ensure no hazardous waste or conditions remain.

18. E-waste, metal waste and battery disposal

18.1 Batteries

Disposal of used batteries is coordinated through sustainability@ontariotechu.ca .

Detailed information can be found on the website at: Sustainability Initiatives

18.2 Metal Waste

Removal of non-hazardous metal waste can be coordinated by emailing through sustainability@ontariotechu.ca .

Detailed information can be found on the website at: Sustainability Initiatives

18.3 E-waste (not IT devices)- asset tagged email service desk

Removal of E-waste can be coordinated by emailing sustainability@ontariotechu.ca

Where applicable the Equipment Decommissioning Form must be completed as noted in Section 17.

Detailed information can be found on the website at: Sustainability Initiatives

19. Waste Coordinators: Contact List

University Waste Coordinators

20. Guide for General Laboratory Spill Kit Contents

The following table shows the minimum materials required in a spill kit for various types of chemical spills:

Spill Type				
Required Materials	**Acid**	**Base**	**Organic Solvent**	**Solid**
Acid Neutralizer/Adsorbent	–			
Base Neutralizer/Adsorbent		–		
Organic Liquid Adsorbent			–	
Neoprene or Nitrile Gloves	–	–	–	–
Goggles	–	–	–	–
Dustpan & Brush	–	–	–	–
Disposable Bags	–	–	–	–
Leakproof Container	–	–	–	–
Hazardous Waste Labels	–	–	–	–
Warning Signs	–	–	–	–
Optional Materials				
Drain Cover	–	–	–	
Caution Tape	–	–	–	–
Shoe Covers	–	–	–	–
PH Indicator	–	–		–
General Purpose Socks	–	–	–	

Reference: https://ehs.utoronto.ca/laboratory-hazardous-waste-management-and-disposal-manual/guide-for-general-laboratory-spill-kit-contents/