

CHEMICAL SPILL KIT ASSESSMENT FOR LABORATORIES

To determine the type of standard chemical spill kit needed for your laboratory and where it should be located, work through the following questions:

Assessment details:

Department: _____ Building _____ Room: _____
Name: _____ Signature: _____ Date: _____

- 1** Do you store or use any liquid chemicals in your laboratory? Yes → Go to step 2
No → You do not need a chemical spill kit

- 2** Determine your spill kit requirements using the information in your chemical register and the tables below :

| | <u>Spill Kit Requirements</u> | <u>Spill Cleanup Material</u> |
|----------------------------------|-------------------------------|-------------------------------|
| Acids (liquid) | _____ | Spill-X-A (neutraliser) |
| Bases (liquid) | _____ | Spill-X-C (neutraliser) |
| Volatile organic solvents | _____ | Spill-X-S (adsorbent) |
| Formaldehyde | _____ | Spill-X-FP (neutraliser) |

↑
Reference Tables

For Acids, Bases or Volatile Organic Solvents*

| | | Volume Stored in Room | | |
|---------------------------------|--------------|--------------------------------|--------------------------------|--------------------------------|
| | | > 100 L | >10 L & ≤100 L | <10 L |
| Frequency of access to chemical | Daily | 2 bottles in lab kit | 1 bottle in a lab kit | 1 or 2 bottles in corridor kit |
| | Weekly | 2 bottles in lab kit | 1 bottle in a lab kit | 1 or 2 bottles in corridor kit |
| | Occasionally | 1 or 2 bottles in corridor kit | 1 or 2 bottles in corridor kit | 1 or 2 bottles in corridor kit |

* Organic solvents are primarily class 3 dangerous goods but should also include other volatile organic liquids such as dichloromethane.

For Formaldehyde

| | | Volume Stored in Room | | |
|---------------------------------|--------------|-----------------------|-----------------------|------------------|
| | | >2.5 L | ≥0.5 & ≤2.5 L | <0.5 L |
| Frequency of access to chemical | Daily | 2 bottles in lab kit | 1 bottle in a lab kit | No special needs |
| | Weekly | 2 bottles in lab kit | 1 bottle in a lab kit | No special needs |
| | Occasionally | No special needs | No special needs | No special needs |

- 3** Do any of the "Spill Kit Requirements" need a "lab kit"?

- Yes → A spill kit should be located within the laboratory.
The standard spill kit box has space to store 6 bottles of "Spill Cleanup Material" and you need to choose the bottles to match the types of chemicals in your laboratory.
- 1/ Start by including the number of bottles of the appropriate "Spill Cleanup Material" that are required to be in a "lab kit" (from step 2).
 - 2/ If the number of bottles required in the "lab kit" is less than 6, add additional appropriate bottles based on the recommendations for the corridor kit.
- No → A spill kit is to be available in the corridor on the same floor
The standard spill kit has space to store 6 bottles of "Spill Cleanup Material". As this will be a multi-user kit the bottles need to be matched to the types of chemicals used by your laboratory **AND** adjacent laboratories.
- 1/ Start by including at least one bottle of the appropriate "Spill Cleanup Material" that is required to be in a "corridor kit".
 - 2/ Where the number of bottles required in a "laboratory kit" is less than 6, add additional appropriate bottles.

- 4** Contact your resource manager/safety officer to arrange for purchase &/or installation of the spill kit

SPILL KIT FAQ'S

◆ What is a spill kit?

A "spill kit" is a collection of equipment and materials that can be used to cleanup spills or leaks of hazardous materials. The contents of the spill kits must be matched to the types of hazardous material spills that could occur, e.g. chemicals, radioisotopes or biohazards. Spill kits can either be assembled in-house from various components or commercial pre-packaged kits can be purchased.

◆ What type of chemical spill kits are used at Monash University?

Standard chemical spill kits

To increase the availability of chemical spill management supplies a standard chemical spill kit has been identified as a good general purpose product for use for the management of small chemical spills in laboratories within Monash University. To initiate this program the University has purchased spill clean up kits centrally and has distributed these to departments [Note: Laboratories can still have additional or alternative chemical spill kits].

These kits may be located in individual laboratories or in corridors in laboratory based departments depending on the risk of a chemical spill occurring.

The standard kit contains six separate bottles of neutralising and/or adsorbent material. The range of neutralising and adsorbent materials available provides scope for the contents of the kit to be matched to the needs of the individual laboratory or to groups of laboratories that might need to use it. The following neutralising and adsorbent materials are available:

| | |
|------------|---|
| Spill-X-A | used for neutralising acids (e.g. hydrochloric acid) |
| Spill-X-C | used for neutralising bases (e.g. sodium hydroxide solution) |
| Spill-X-S | used to soak up volatile organic chemicals that may or may not be flammable. (e.g. acetone or dichloromethane) Note: this adsorbent does not neutralise the chemical but it will prevent the release of airborne vapours. |
| Spill-X-FP | used for neutralising formaldehyde |

There may also be a need for additional spill kits or materials for some specific chemicals such as mercury and phenol.

Building chemical spill kits

To ensure that adequate resources are available to manage chemical spills a large spill kit [bright orange wheelie bin] has been assembled for buildings that have multiple areas that store and use chemicals. The kits will generally be located at or near the fire indicator panel for the building. One of the primary reasons for having this style of kit is to ensure that there are always adequate chemical spill management supplies available to the emergency services.

These kits contain additional spill cleanup materials and equipment as well as a range of personal protective equipment. They also contain fold out warning boards and barrier tape to assist departments in being able to cordon spill areas off if necessary.

These kits can be utilised by departments where additional materials are required to manage a laboratory spill.

Note: Departments need to restock the kit when they use supplies from this source.

◆ Do I need a chemical spill kit in the laboratory or is close by in a corridor sufficient?

Whether you need a chemical spill kit in the laboratory or whether a chemical spill kit close by in a corridor is sufficient, depends on the risk of a chemical spill occurring. The key factors that affect the risk of a chemical spill occurring are the amount of chemicals that are stored in a laboratory and the frequency with which the chemicals are used.

◆ Who is responsible for maintaining chemical spill kits?

The departments are responsible for maintaining the chemical spill kits in their departments. So when you use any materials from the chemical spill kit you must arrange for replacement of the items by notifying the appropriate person in your department (e.g. resource manager or safety officer).