Chemical Spillage

## When to clear up a spill

There are some spillages that you should simply leave to the experts.

Basically, any spill that generates large amounts of hazardous fumes. In particular:

* Bromine
* .880 Ammonia
* Glacial ethanoic acid (and propanoic or butanoic acids)
* Concentrated hydrochloric acid
* Concentrated nitric acid

And any other source of hazardous fumes – if for instance the spillage is a dilute acid and a sulphite – it will generate sulphur dioxide.

In situations like this, evacuate the chemicals store/prep room/classroom as soon as possible – There MAY be time in the larger space of a classroom to open a window or switch on a ducted fume cupboard in passing.

In most cases, the ventilation will run its course and clear the air – though it could take many hours.

If the ventilation is not clearing it – call the fire brigade.

## Solids

In general, solids are pretty easy to deal with:

Collect them up in a dustpan and brush and dispose as recommended for that chemical.

**Be wary of powders** – avoid raising dust - if this can’t be avoided, wear a well-fitting dust mask.

## Liquids

In general liquids can be absorbed into a solid – cat litter is the best for this. It can then be swept up and disposed of. It can then either be disposed of in the normal waste – washed with water to get rid of the chemical or, if it is toxic etc, bagged, sealed in a container, labelled and kept for uplift.

Some types of liquid, however, need more.

**Acids and alkalis**

Assuming there is no problem with fumes.

For spills of acids – such as concentrated H2SO4 – neutralise with anhydrous sodium carbonate or hydrogencarbonate and then dispose normally

For alkalis – such as sodium hydroxide – if a solid, just brush with a dustpan and brush and dispose normally. If a solution, neutralise with citric acid and then scrape up and dispose.

**Oils & other water-immiscible liquids**

Absorb into cat-litter and clear up as before.

Use detergent to clear up the remnants and make sure the area is safe.

**Flammable liquids**

Fairly small amounts can be absorbed into paper towel or similar and then placed in a fume cupboard to evaporate. This is only really suitable for a ducted fume cupboard.

Do not place the material in the bin – it will continue to evaporate and produce flammable fumes. If no suitable fume cupboard is available remove from the laboratory and allow to evaporate outside.

Large spills – in the chemical store just evacuate the room and allow the ventilation to clear it. In the laboratory. Switch off any sources of ignition, eg Bunsens, open windows if possible. Absorb onto sand/cat-litter and sweep up into a container to be removed outside and left to evaporate.

In both cases, wash the site of the spillage afterwards carefully with detergent.