



**COSHH: Control of  
Substances Hazardous to Health**

**Module 4**

---



Health & Safety  
**Essentials**

Registered charity number 207890

# Reviewing tasks in the laboratory

## Objective:

In this module, you will learn how to identify the tasks or activities that use hazardous substances (chemicals).

## Recording laboratory tasks

Experience shows that adequate assessment of health risks is best achieved by **reviewing the principal tasks** and considering the **associated hazards** and likely exposures. Typical laboratory tasks include:

- preparation of samples for analysis
- preparation of reagent solutions
- solvent extraction
- cleaning of glassware
- maintenance of equipment

Substances to consider when assessing laboratory tasks include reaction intermediates, by-products, effluents and wastes, in addition to more obvious reagents, "incompatibilities" (information in SDS), products and samples.

Risks arising from cleaning materials and substances used in maintenance (such as lubricants, paints and adhesives) should also be assessed, as should substances whose composition may change during use (e.g., oils in vacuum pumps).

It is important to remember that the properties of mixtures and preparations may differ from those of their components.

Don't forget ancillary work such as collecting and disposing of laboratory waste, (treatment, in preparation for disposal, of hazardous waste from the laboratory is part of the risk assessment process) and cleaning and maintenance of buildings and facilities. Such activities often give rise to significant risks, especially to contractors and visitors who are likely to be less familiar with the work of the laboratory.

The procedure described is based on the steps described in COSHH Essentials. It takes a generic approach to both hazards and exposures, grouping them into broad categories, which can then be combined to indicate the degree of risk and thus the appropriate level of control.

As a laboratory chemist, you need to know how to clear up spillages of common laboratory reagents such as solvents, acids, bases and oils, to name a few. Not all spillage controls will be included in the COSHH assessment; nevertheless, having a basic grasp of managing spillages is essential in a practical laboratory.

## What does a risk assessment entail?

**A risk assessment is simply a careful examination of what, in your work, could cause harm to people's health, so that you can determine whether you have taken adequate precautions or should do more to prevent harm to health.**

It entails:

1. identifying the hazards
2. deciding who might be harmed and how
3. evaluating the risks and deciding on precautions
4. recording the findings (1-3) and implementing them
5. reviewing the assessment, monitoring controls and updating if necessary



**In the UK, you are legally required to assess the risks in the laboratory so that you can create a plan to control the risks. You are also required to make sure those control measures are used and that they are working properly.**

COSHH is one type of risk assessment. A COSHH assessment focuses on controlling health hazards associated with hazardous substances (chemicals).

It is necessary to be able to **demonstrate** that all **risk assessments** are **“suitable and sufficient”**.

This means that a risk assessment should take consideration of:

- the hazardous properties of the substance
- information on the health effects provided by the supplier (SDS)
- the level, type and duration of exposure
- the circumstances around the work, including the amount of substance used
- activities such as maintenance
- the effect of preventative control measures
- any relevant workplace exposure limit (WEL)
- the results of relevant health surveillance
- the results of any occupational exposure monitoring
- the risks of substances in combination
- any additional information that is available

This means that you can say that all the significant chemical hazards have been identified and you can specify how harm to health is likely to occur.

Think about:

- Routine tasks (e.g., in lab, between labs, wash-up areas and stores)
- Non-routine activities (e.g., maintenance and cleaning)
- The possibility and likelihood of accidents and incidents!
- All those who might be affected by the hazards  
Self  
Colleagues/ other staff  
Visitors (e.g., cleaners/engineers/contractors)  
Public  
Vulnerable people (pregnant workers, disabled workers, lone workers, etc.)

## Learning assessment 3

Are these statements true or false?		true	false
1.	The cleaners don't use the chemicals in the lab, so COSHH assessments don't apply to them.		
2.	There is already a risk assessment covering the undergraduate-taught practical ,so I don't need to do a new one each time		
3.	Risk assessments are the sole responsibility of the project supervisor.		
4.	Taking out the laboratory waste at the end of the day is routine, so no risk assessment is needed.		

Check your answers on the separate answer sheet.

