



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

Module 7



Health & Safety
Essentials

Registered charity number 207890

Management and training

Objective:

In this module, you will learn about procedures and processes that are needed to control exposure.

It is good practice to prevent accidents and injury in the laboratory; however, it is also a legal requirement in the UK under the COSHH Regulations to have arrangements in place to deal with accidents, incidents and emergencies. Having reviewed the existing controls in place, further controls to reduce the risk should be implemented as necessary, and plans made for appropriate improvement action as needed. It is essential to define responsibilities for the implementation of COSHH (and all other relevant legislation) in a particular laboratory. These should be stated clearly in the laboratory safety policy.

The COSHH Regulations define the principle of good practice as follows:

1. Design and operate processes and activities to minimise emission, release and spread of substances hazardous to health.
2. Take into account all relevant routes of exposure—inhalation, skin absorption and ingestion—when developing control measures.
3. Control exposure by measures that are proportionate to the health risk.
4. Choose the most effective and reliable control options that minimise the escape and spread of substances hazardous to health.
5. Where adequate control of exposure cannot be achieved by other means, provide, in combination with other control measures, suitable personal protective equipment.
6. Regularly check and review all elements of control measures to ensure their continuing effectiveness.
7. Inform and train all employees on the hazards and risks from the substances they work with and the use of control measures developed to minimise the risks.
8. Ensure that the introduction of control measures does not increase the overall risk to health and safety.

Management and control

Having decided which control approach is needed, specific control measures can be selected. Management (senior managers, laboratory managers and principal investigators) must establish procedures to ensure that control measures, including items of PPE, are maintained and properly used and applied. Employees and others at risk must use the controls provided in the way that they were intended to be used and as they were instructed. They must practice a high standard of personal hygiene, make proper use of the facilities provided and inform management of any observed defects in the equipment, facilities or procedures.

- **You should always wash your hands upon leaving the lab, and at once if contaminated.**
- **You should always wear safety spectacles as a minimum requirement at all times whilst in the laboratory.**

Management must also ensure that any reported defects are investigated promptly and that suitable actions are taken, including advising employees of the outcome of the investigation.



Having identified and installed appropriate control measures, laboratory managers must ensure they are properly used and maintained in order to provide adequate protection. All controls (both engineering and procedural) must be checked regularly and maintained or updated to ensure their effectiveness.

Persons appointed to carry out specific tasks need to be adequately “competent” to do so as defined by COSHH; i.e., they should have the necessary skills, knowledge, practical experience and training. They do not need to be experts but must recognise their limitations and know when to call on the expert advice of a specialist from inside or outside the organisation.

You do not need any particular qualifications to assess risk but you must be competent. This means you must have the adequate knowledge, skills, training and experience in assessment, evaluation and control of risks to do the job properly. You should:

- Understand hazard and risk
- Know how the work can expose people to substances hazardous to health
- Have the ability (and authority) to collect all the necessary information
- Have the knowledge, skills and experience to make the right decisions about how to control exposure.
- Know when you need to refer to supervision or ask for specialist advice.

Information, instruction and training

Information, instruction and training is required for all persons who may be exposed to substances hazardous to health so that they know the risks to health and the precautions needed to prevent harmful effects.

Information about hazards, risks and appropriate precautionary measures should be authoritative, understandable and accessible to everyone potentially exposed to the substances, including contractors and visitors to the laboratory.

Instruction should be suitable and sufficient for individuals to know how and when to use a control measure. Procedures on how to use any PPE, cleaning, disposal, storage processes and any procedures to follow after an emergency or unplanned event should be explained. Where individual actions are critical in the control of risks, clear instructions should be given, preferably in writing (as approved procedures or standard operating procedures or instructions).

Training involves showing students and others how they should put information and instruction into practice. It should be carefully targeted to the needs of trainees to ensure that they understand the hazards and risks and are competent to carry out the necessary instructions. It is essential that training is completed and understanding assured before people are exposed to hazardous substances.

This includes cleaning and maintenance staff. All appropriate staff need to understand the outcome of your risk assessment and what this means for them. Tell them:

- the names of the substance and the hazard and risks that are present to health
- about any workplace exposure limit
- the results of any monitoring of exposure
- the general results of health surveillance
- what to do if there is an accident (e.g., spillage) or emergency

You should have easy access to suppliers' safety data sheets. All workers need to be kept informed about planned future changes in processes or substances used.

All information, instruction and training should be kept up to date and regularly reviewed, revised and provided as necessary.



Record keeping

The significant findings of risk assessments must be recorded and a copy, ideally signed, kept in the laboratory safety file, so that it is readily accessible and retrievable.

Risk assessments (RA) may vary in their complexity, so one is free to create and use an RA appropriate to one's needs. However, make sure you cover the key points:

- What are the hazards and risks and to whom, doing which task
- What control measures could prevent harm
- Using these control measures and checking that they work

The RA should be used to develop Standard Operating Procedures, protocols or rules, which must be followed.

Six things you must **NOT** do:

1. Eat or drink in the Laboratory
2. Sit "sidesaddle" at the bench
3. Put your sandwiches in the lab fridge
4. Wear open-toed sandals in the lab
5. Wear headphones in the lab
6. Answer your mobile with gloved hands

Six things you **SHOULD** do

1. Wash you hands upon leaving the lab
2. Use a sparkproof fridge to store solvent-based materials
3. Button up your lab coat and wear eye protection
4. Tie back long hair
5. Check that the gloves you are wearing protect you from the chemicals you are using
6. Keep books and chemicals separate

