



Safety Training for work in Biological Laboratories

It is a legal requirement that all workers handling hazardous materials receive appropriate information, instruction and training in order to carry out their work safely. Records should be kept to demonstrate this has been carried out. Inspectors from the Health and Safety Executive (HSE) increasingly ask to see training records during routine or incident investigation visits.

As part of the induction procedures when first arriving, all persons working in the University should be made aware of the University Health and Safety Policy and of any other local health and safety policies made at School level and below. Schools should ensure induction procedures include provision of appropriate safety information.

The Research Group Leader/Principal Investigator of a given research group, or the supervisor/manager of a unit or work area, should ensure all workers they are responsible for supervising receive the appropriate safety information and training. This does not necessarily mean that they have to provide it themselves (it can be delegated or workers sent on courses etc) but they must assure themselves that it has been provided and understood and the worker is competent to work safely. In order to effectively discharge these responsibilities, those with supervisory or managerial roles must themselves be competent in safety related matters and, where necessary, should seek additional training (or refresher training) as appropriate. The model training record proforma provided below should assist those with supervisory or managerial responsibilities to identify workers training needs.

In relation to work in biological laboratories, all persons handling biological materials must be able to recognise how exposure to biohazards can occur and how it can be prevented. The information and instruction provided should include

- the local rules for working in the laboratory;
- any standard operating procedures (SOPs) and work protocols;
- disinfection procedures;
- waste disposal procedures;
- the procedures to be taken in the event of accidents and incidents; and
- details of the risk assessments for the work to be undertaken explaining both the nature of the hazards and the use of control measures. The risk assessments should include details of, or reference to documents containing, the other bulleted points above.

The University Health and Safety Department offers training courses on various biosafety related topics and attendance at relevant sessions should be regarded as an essential part of the training for workers handling biological materials. The University Health and Safety Department's website has information on a wide range of biosafety related subjects and Schools may find it useful to refer workers to some of these documents as part of the information and instruction they provide.

Workers must be trained and should be proficient in safe working practices and techniques to ensure the safety of themselves and other persons in the laboratory. Training must specifically include all safety related matters in order that workers know how to effectively apply routine and emergency control measures.

The degree of training required should be proportionate to the risk. Where work involves handling of pathogens (or materials that may contain these) or genetically modified micro-organisms, specific training should be given on how to work safely with these. The amount of training that needs to be provided will also depend on the experience of the person being trained but supervisors should not assume competence until it has been demonstrated. Particular care must be taken in the training of students and in their supervision.

Provision of information and instructions and attendance at training courses should not be regarded as all that is required. This must be supplemented by practical demonstration and assessment of competence in the laboratory. A suitable training programme should be drawn up locally taking into account the nature of the work concerned. On the job training is important and work practices should be monitored. Any shortfall in standards should be brought to the attention of the laboratory supervisor, or Research Group Leader/Principal Investigator, as appropriate, and be addressed immediately.

As noted above, the Research Group Leader/Principal Investigator of a given research group, or the supervisor/manager of a unit or work area, has a duty of care to the members of his/her team to ensure that procedures are in place to safeguard their safety and health whilst at work. This duty of care is more onerous where the workers concerned are young or inexperienced in the particular work activity. Failure to manage health and safety matters adequately will reflect badly upon the individual, and for Research Group Leaders/Principal Investigators on the management of his/her research group in general, and runs the risk of enforcement action which is likely to substantially disrupt any given programmes of work.

A model training record proforma is provided for workers in biological laboratories. Many of the basic procedures and control measures are common to all laboratories and the form can be tailored as appropriate for the different areas of work carried out. As such this proforma can be used as the basis of a training record for all biological workers at Containment Levels 1 and 2 including work with blood and human tissues, pathogens and genetically modified micro-organisms. For those undertaking work with pathogens or GM work at Containment Level 3, a more specific and detailed training programme will be required for the activities in the CL3 facility and a separate record should be kept for this.

This proforma is available for download at
http://www.docs.csq.ed.ac.uk/Safety/bio/forms/training_record.doc or
http://www.docs.csq.ed.ac.uk/Safety/bio/forms/training_record.pdf