

Adequate safety management within laboratories requires that responsibilities, systems and laboratory local rules (that must be followed) are clearly defined and that everyone who works within the laboratory is made aware of, and adheres to these rules. The goal is to protect those working within a laboratory, others who may be exposed to hazards from the laboratory, and the environment.

Principal Investigator (PI) (including Supervisors) and individual responsibilities are clearly defined in the Departmental Safety Handbook however it is worth reiterating that PIs are responsible for the safety and health of all personnel within, and visitors to their laboratories. Consequently, the PI must ensure that:

- All personnel receive appropriate training.
- All personnel adhere to the local rules.
- Appropriate personal protective equipment is available and functioning correctly.
- Regular inspections of the laboratories are conducted which include safety systems, emergency equipment and housekeeping.
- Suitable safe operating procedures are developed specific to the operations within the laboratory.

Group Safety Representatives

PIs should appoint a Group Safety Representative for their research group/laboratories. Where PIs elect not to appoint a Group Safety Representative, the PI will undertake all the duties of the Group Safety Representative. Within large research groups, it is advisable that more than one Group Safety Representative is appointed and arrangements should be in place to cover sickness, annual leave and planned absences. PIs must be aware that whilst they can delegate duties, they cannot delegate their legal responsibilities regarding health and safety.

Group Safety Representatives advise and assist the PI in training new personnel, disseminating safety information, conducting inspections of the group laboratories and inspecting and ensuring the maintenance of group equipment such as spill kits (where applicable), fire extinguishers, safety shower and eye wash facilities. The Group Safety Representative duties include, but are not limited to, safety issues involving chemical hygiene.

Laboratory Safety Management Procedures

Areas to consider when devising laboratory safety management procedures include:

- Housekeeping – it may be useful to issue general guidelines (see below) as well as designate certain tasks to key individuals e.g. maintenance of fridges/freezers and communal areas and equipment such as balances. These tasks would need to be clearly defined.
- Work practices i.e. behaviour, personal hygiene, use of personal protective equipment (PPE).
- Waste disposal – chemical and general waste.
- First aid equipment.
- Fire safety equipment.
- Communal equipment.
- Safety data and information.
- Chemical procurement, distribution and storage including maintenance of a chemical inventory.
- Shut down/end of day procedures.
- Reporting failures/breakdowns in services.

- Non-compliance and disciplinary procedures.
- Training, including laboratory induction and laboratory specific safety procedures.
- Authorisations – i.e. who has authority in the absence of the PI, who signs the COSHH forms?
- Monitoring of the procedures to ensure compliance – this should be through regular inspections at intervals of no more than 3 months.

Housekeeping – General Guidelines

There is a definite relationship between safety performance and orderliness with the laboratory. When housekeeping standards fall, safety performance inevitably deteriorates. The work area should be kept clean, and chemicals and equipment should be properly labelled and stored.

Housekeeping is the responsibility of all laboratory workers and should principally include:

- Returning reagents to their designated storage area after use.
- Returning items of equipment not in use to storage.
- Cleaning and putting away glassware.
- Tidying and cleaning of benches, fume cupboards and communal areas. Cleaning up should follow the completion of any operation or take place at the end of each day. There should be a written cleaning schedule for communal areas.
- Removal of out-of-date chemicals and cleaning of bottles. The maintenance of a chemical inventory will aid stock control.
- Labelling of reagents in secondary containers e.g. beakers and the replacement of deteriorated labels.
- Discarding disposables into appropriate containers.
- Collection of waste in designated areas within the laboratory and the regular collection and removal of the same.
- Maintenance of means of access to and egress from the laboratory.