

Health & Safety in University Laboratories

Have we got it right?

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Health & Safety Statutory Law

HSWA 1974

Health & Safety Duties - Statutory Law

- **Statute** law made by **Parliament** places specific H&S duties on organisations and individuals
- Breach of H&S duties can lead to criminal prosecution
- Three types of duties under statute law
 - **absolute duties** - must be complied with
 - duties qualified by the term "**practicable**" (technically possible) must be complied with **regardless of cost**
 - duties which are qualified by the term "**reasonably practicable**" take costs of eliminating risk into account.



The Health and Safety at Work Act 1974 (1)

The Health and Safety at Work Act 1974 (HSWA 1974) contains provisions for:

- securing the health, safety and welfare of persons at work and protecting others
- controlling the keeping and use of **dangerous substances**
- the **control** of certain **emissions** into the atmosphere.

HSWA is not the only applicable law - Environmental Law & Anti-Terrorism Crime and Security Act (applies to certain materials) and European Union Laws.



The Health and Safety at Work Act 1974 (2)

Under HSWA most duties qualified by the term "reasonably practicable"

As far as "reasonably practicable" one must:

Provide and maintain plant and systems of work that are safe and without risk to health;

Make arrangements to ensure that the use, handling, storage and transport of articles and substances are safe and without risk to health

Provide such information, instruction, training and supervision as is necessary to ensure the health and safety of their employees

Provide and maintain a safe place of employment and safe means of access and egress that are without risk to their employees; and

Provide and maintain a safe working environment without risk to their employees with adequate facilities and arrangements for their welfare.

The Health and Safety at Work Act 1974 (3)

- Employers with $5 \geq$ employees - written H&S policy at work
- *Employers must ensure “reasonably practicable” safety of persons not in their employment who may be affected by their activities at work (students/visitors).*
- Persons in control of premises have duties towards those who use the premises and plant or substances provided for use are safe so far as is “reasonably practicable”.
- Employees must take reasonable care both for their own health and safety and for that of other persons who may be affected by their acts or omissions at work.
- Designers, manufacturers, importers and suppliers of articles or substances for use at work must ensure as far as “reasonably practicable” are safe when used at work (safety testing / information)

HSWA 1974 Regulations

HSWA (Enabling Act) allows repeal, updating, enactment of Regulations

Regulations have been made dealing with:

- Management of Health and Safety at Work*
- Reporting of Accidents Diseases And Dangerous Occurrences (RIDDOR)
- first aid
- safety signs
- notification and control of various hazardous activities
- Control Of Substances Hazardous to Health (COSHH)
- Classification, Labelling & Packaging of dangerous substances (CLP)
- personal protective equipment, etc.



*Management of Health and Safety at Work Regulations (MHSW) 1999 make good Health & Safety management a legal requirement.

Common Law

“Duty of Care”

Common Law

As far as health and safety is concerned there are two branches of law that are applicable - Statute Law and Common Law

Common Law (England and Wales*) is about resolving disputes and providing compensation when appropriate to injured parties.

*(*Some differences in Common Law in Scotland and Northern Ireland)*

Common law is traditional law based on the principles and rules of which are contained in decisions of English and Welsh Courts

Under Common Law an employer owes a common law duty of care to employees.

Duties Under Common Law (1)

The main duties of employers in common law are:

- to provide and maintain a safe place of work;
- to provide and maintain safe plant and equipment;
- to provide and maintain safe systems of work; and
- to provide employees with colleagues (co-employees) who are competent to carry out their duties safely.

The employer must take reasonable care for his employees and anyone else who may be affected by his activities.

If an employer fails in his duty of care towards employees and they suffer injury or an occupational disease they can sue for compensation.

Employers Liability (Compulsory Insurance) Act 1969 requires employers to take out an insurance policy to cover legal liability to their employees.

Duties Under Common Law (2)

In common law the manager acts on behalf of the employer. Therefore, the employer is vicariously liable for the acts & omissions of his manager.

Any action alleging negligence must be taken against the employer.

If a manager is involved he must be able positively to demonstrate:

- the effectiveness of his supervision;
- the reasonableness of his actions;
- his consideration of foreseeable events and behaviour;
- his evaluation of the effectiveness of risk controls; and
- his part in the relevant decision making process.

If an employee brings an action (for negligence) against his employer, the employee must prove:

- that his employer owed him a duty of care;
- that his employer broke that duty; and as a result,
- this negligence caused the employee's injury or occupational disease.

“Directing Mind”

**Role of the Manager
&
Competent Persons**

Role of the Laboratory Manager

A person described as a 'manager' is simply someone employed to instruct others at work i.e. anyone, responsible for other staff.

Being a 'manager' embraces three roles:

- an agent of the employer - controls employees and the work done.
- a responsible person able to assess and control risks especially when abnormal circumstances occur by exercising initiative and judgement.
- as an employee manager has the same responsibilities as any other employee under the HSWA 1974 and subsidiary Regulations.

Managers have an important role promoting H&S and ensuring that laboratory workers manage the risks associated with their work.

“Directing Mind”

- The **most senior level of management** are in effect part of the “**directing mind**” of an organisation and, therefore, control it.
- *The requirement does not relate to someone described as a “manager” who does not exercise overall control of the organisation.*
- **Members of the Board of Directors** have both collective and individual responsibility for health and safety.
- **Directors** need to demonstrate strong and effective leadership in matters relating to health and safety.



Competent Persons

Employers must have competent assistance to help them meet the provisions of H&S Law

Employers must ensure that those appointed are competent to carry out their assigned tasks (information, instruction, training & support)

Competence depends on:

- an understanding of relevant current best practice;
- awareness of the limitations of one's own experience and knowledge;
- the willingness and ability to supplement experience and knowledge.

If the competent person fails to provide the necessary services the responsibility for legal compliance still lies with the employer

Complying with MHSW (1999) Regulations

Management of H&S at Work Regulations

The employer must:

- **assess risks** to H&S arising from his work or undertaking, as they affect both his employees at work and others.
- **make appropriate arrangements** covering effective planning, organisation, control, monitoring and review of preventative and protective measures
- **appoint** one or more **competent persons** to assist him to discharge his legal obligations.

Employees must:

- **use** machinery, equipment, dangerous substances, transport equipment and safety devices **in accordance** with their training and the **instructions** which they have been given.
- must **inform** their **employer** and other **employees** of any **dangers** or shortcomings in the protection arrangements.

Risk Assessments

Required for:

- COSHH Regulations
- Fire Safety Order
- DSEAR

'Suitable and sufficient'

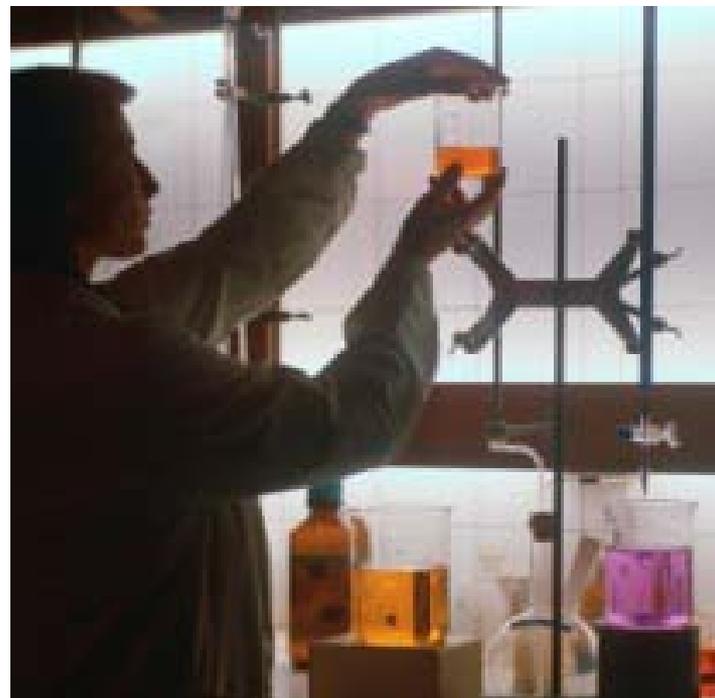
- Identify hazards and associated risks
- Identify persons at risk
- Existing controls and their adequacy
- Additional controls needed
- Priority for implementation of additional controls
- Signed and dated
- Reviewed periodically, after changes and accidents



Control Measures

- Physical safeguards
- Engineering controls
- Personal protective equipment
- Safe systems of work *
- Training*
- Checks and inspections
- Disciplinary procedures

* Key elements



COSHH in Laboratories

RSC 1989 booklet used by HSE as a basis for COSHH Essentials

COSHH assessments:

- are about work activities
- need to be 'suitable and sufficient'
- are not re-iterations of datasheets
- need to be reviewed periodically and after significant change



COSHH – the Competent Person

A person with the skill, knowledge, practical experience and training to enable the assessment of risk, who should:

- understand the hazard and the associated risk
- know how work can expose persons to hazardous substances
- have ability to collect all necessary information
- be able to make correct decisions on control of exposure



Other Laboratory Health & Safety Issues

- Lone Working and Laboratory Activities
- The Safety of Laboratory Workers with Disabilities
- Pregnant Workers, Chemicals and the Law
- Health & Safety of Young Persons Working in Chemical Laboratories



Lone Working

- Working in physical isolation
- No prohibition on lone working
- ‘Suitable & sufficient’ risk assessment required (Management Regs.)

Actions:

- Avoid lone working where reasonable practicable
- Minimise the need for lone working
- Provide equipment and procedures to control the risk

Laboratory Workers with Disabilities

- Disability Discrimination Act 1995 defines a disabled person as “someone with a physical or mental impairment which has a substantial and long term effect on his or her ability to carry out day-to-day activities”
- A disabled person should not be discriminated against and must be treated equally with non- disabled persons on all employment issues.
- A ‘suitable and sufficient’ risk assessment is required.
- As outcome of risk assessment reasonable adjustment to working conditions and working environment must be made to eliminate, reduce or control the risk.

Pregnant Workers

- Management Regulations recognise the need to protect new and expectant mothers
- ‘Suitable and sufficient’ risk assessment required and to cover the use of chemicals, physical hazards, psychological hazards, stress, biological hazards and ionising radiations.
- Risk assessment can only be done when pregnant worker has informed her employer in writing

If a risk to pregnant worker is identified then employer should:

- Adjust employees working conditions &/or hours and if not reasonable or would not avoid the risk then –
- Offer suitable alternative work on same terms and conditions. But if not feasible then –
- Suspend worker on full pay as long as necessary to protect her safety or health and that of her child.

Young Persons

- No legal prohibition on young person working in laboratories.
- Management Regulations recognise that young persons need protection
- ‘Suitable and sufficient’ risk assessment needed
- Providing employers comply with their legal duties and obligations then the young person would be protected.
- RSC believes young persons who wish to pursue higher education in chemistry or chemical sciences should have the opportunity to gain practical experience in laboratory work.

Enforcement of HSWA (1974)

Enforcement of HSWA 1974

HSWA 1974 administered and enforced by HSE or Local Authorities

Contravention of legal requirements could result in:

- the issue of an Improvement or Prohibition Notice
- a prosecution being taken against an employer (or employee).
- Where an offence is committed by a body corporate, that body can be prosecuted and if committed with the consent or connivance of, or is attributable to neglect on the part of any Director, Manager, Secretary or similar officer of a body corporate, the persons concerned can be prosecuted as individuals in addition to the body corporate.
- If an individual is killed at work, the body corporate can also be prosecuted under the Corporate Manslaughter and Corporate Homicide Act 2007 if the death was caused by management failure.

Breaches of HSWA 1974

- Any breach of statutory law due to a management failure may cause the enforcing authority to bring a prosecution against the employer and, possibly, the manager as an employee.
- Breaches of statutory law may result in prosecution of either the employer or manager or both - depends on how manager's judgement accorded with the employer's established practice.
- In the worst case, where the employer can show that he/she exercised due diligence, the manager alone may be prosecuted.



Statute Law Penalties: Magistrates Court

Criminal proceedings under the HSWA 1974 are usually instituted by an Inspector or with the consent of the Director of Public Prosecutions.

The maximum fine imposed in a Magistrates Court for each offence under Sections 2 to 6 of HSWA 1974 is £20,000. Includes failure to comply with an improvement notice, prohibition notice or a Court Remedy Order (to achieve compliance)

All other offences - maximum fine is £5,000.

Magistrates can imprison individuals for up to six months for the breach of an improvement notice, prohibition notice or a Court Remedy Order

Magistrates can also refer a prosecution to a Crown Court



Statute Law Penalties: Crown Court

Crown Court fines for offences under the HSWA 1974 are unlimited.

The Crown Court can imprison individuals for up to two years for the breach of an improvement notice, prohibition notice or a Court Remedy Order.

In his defence the accused must prove that it was not practicable, or not reasonably practicable, to do more than he did to satisfy the duty or imposed upon him.

If the organisation has taken no action or inadequate remedial action after the original contravention then the Court can issue a Court Remedy Order requiring the organisation to correct matters to achieve compliance

Proceedings for an offence under the Corporate Manslaughter and Corporate Homicide Act 2007 can only be heard in the Crown Court by a judge and jury. The penalty on conviction is an unlimited fine.

What is the RSC doing to improve Laboratory Health & Safety?

RSC Health & Safety Priorities

- **Laboratory safety is a high priority for RSC**
- **Ensuring** that people have the **skills to practice chemistry competently**
- **EHSC Guidance Notes** on the RSC website

<http://www.rsc.org/ScienceAndTechnology/Policy/EHSC/index.asp> or
<http://www.rsc.org/> (*enter **EHSC Guidance** into the search box*)

- **University Laboratory Safety Online-Resource *in development***

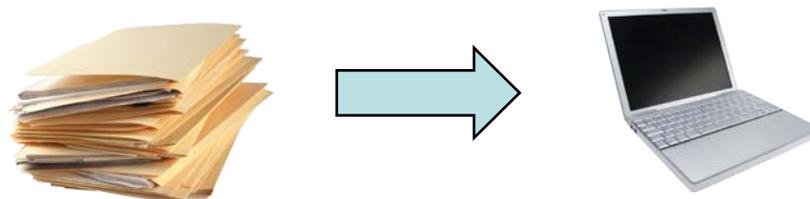
University Laboratory H&S on-line Resource

RSC project with the University Chemical Safety Forum and other interested parties aimed at:

Promoting a culture of safe laboratory practices in all UK HE and FE Chemistry Departments

Currently compiling essential existing information on best practice covering different aspects of Laboratory Health and Safety

This initiative will involve:



The preparation of a series of discrete interactive H&S training & guidance modules.

Publication and dissemination via RSC “Learn Chemistry” website.

University Laboratory H&S on-line Resource

Control of Substances Hazardous to Health Pilot Study

- On-line Learning Modules (with built in assessment):
 - Legal context (duties & responsibilities)
 - Key Concepts (Hazard, Risk & Exposure)
 - Classification of Hazardous Substances (CHIP, CLP)
 - Exposures (assessment, routes, effects)
 - Review of Tasks in the Laboratory
 - How to conduct a Risk Assessment
 - Control Approach Hierarchy (eliminate, substitute, reduce, isolate, systems of work, PPE training and signage)
 - Specific Control Measures
 - Unplanned Events, Incidents & Emergencies
 - Management & Training
 - Review & Monitoring (Control Measures, Exposure & Records)
 - Sources of information (worked examples, forms, videos, etc.)



University Laboratory H&S on-line Resource

Next Actions:

- Consult the user community about contents and functionality of the COSHH Pilot Resource (*January 2013*)
- Incorporate recommendations, build in additional features and expand the on-line resource to cover other Laboratory H&S topics in greater depth including:
 - Organising for H&S
 - Identifying and controlling general and specific risks
 - Safe waste disposal
 - Safety in the planning and design of laboratory environments
 - Storage and enhanced security considerations
 - Monitoring the effectiveness of the safety control measures
 - Emergency responses (including accident investigation)
 - Record keeping (*August 2013*)
- Adapt for Developing Countries (*November 2013*)

see <http://www.rsc.org/> (*enter EHSC Guidance into the search box*)

Thank you for listening
any questions?



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