## Control of Substances Hazardous to Health (COSHH) Regulations

### 1. Introduction:

This guidance has been developed to assist Heads of College, Schools or Units collectively known as Heads of Management Units (HoMU) implement good practice in the areas under their control in relation to the purchase, handling, use, storage and disposal of chemicals recognised as hazardous to health. This guidance is a summary of the COSHH Regulations last updated in 2005 which are a legal framework for controlling exposure to hazardous chemicals. [www.opsi.gov.uk/si/si2004/20043386](http://www.opsi.gov.uk/si/si2004/20043386).

**Note:** Compliance with the COSHH regulations should not be seen simply as a form filling exercise. The assessment should be viewed as an essential decision making process on the control measures required to be implemented to ensure minimum exposure to hazardous chemicals is achieved. The decisions made should be based on the chemical information supplied and obtained and the reaction conditions to be applied to the hazardous chemical.

### 2. Definition of a Hazardous Substance:

The following are the ones most commonly used:

- Chemicals or mixture of chemicals classified as dangerous to health under the Chemicals (Hazard Information and Packaging for Supply) Regulations. [www.opsi.gov.uk/si/si2002/20022677.htm](http://www.opsi.gov.uk/si/si2002/20022677.htm)
- Chemicals that have been assigned a Workplace Exposure Limit (WEL) [www.hse.gov.uk/coshh/table1.pdf](http://www.hse.gov.uk/coshh/table1.pdf)
- Any dust with an average concentration in air that exceeds the levels specified in the COSHH regulations noted as > 10mgm⁻³ of inhalable dust or 4mgm⁻³ of respirable dust as a time weighted average over an 8 hour period.
- Biological agents that are directly connected with work activity (e.g. Legionella bacteria from water cooling towers)
- Other substances that are hazardous to health that don’t fall into the above categories. (e.g.asphyxiant gases, some pesticides).
3. COSHH Requirements:

The regulations impose a number of duties on both employers and employees. HoMU must have measures in place to comply with the following duties in respect of work under their control.

- Assess the risk to all staff, students and visitors from hazardous substances present or produced in the workplace.
- Prevent or control the exposure to hazardous substances of personnel and others.
- Ensure that control measures both engineering and personal protective equipment (PPE) are properly used and maintained. This should include standard operating procedures (SOPs) identified as part of the control criteria.
- Where necessary arrange for monitoring of workplaces to ensure WEL’s are not being exceeded.
- Where appropriate arrange for health surveillance of staff routinely handling/using chemicals which can cause severe damage to health.
- Provide personnel and others with information, instruction and training so they can undertake the chemical activity safely with minimum exposure.

All employees, visitors and students must:
- Follow SOPs and safe working practices.
- Use control measures including PPE properly and report defects to management.
- Attend health surveillance appointments as requested.

4. COSHH Assessment Principles of Good Practice:

The following is based on the hierarchy regarding the safe use of hazardous chemicals:

a) Prevent exposure where reasonably practical:
   - Use a safer chemical alternative
   - Use the chemical in a more controllable form.
   - Develop an SOP to minimise potential exposure.

b) Where exposure prevention is not practical it must be controlled by:
   - Providing equipment, facilities and operating procedures to ensure minimum exposure.
   - Avoiding exceeding the WEL for chemical used.

c) Control measures should include any or a combination of the following:
   - Totally enclosed system.
   - Provision of LEV systems (Fume Cupboards, Safety Cabinets etc.).
   - Provision of hygiene facilities.
   - Provision of suitable chemical storage, handling and transport equipment.
   - Provision of appropriate PPE.
   - Changes to systems of work to minimise the number of personnel potentially at risk of exposure.

Note: Evidence should be available to confirm that the control measure when used properly is effective and reduces the risk of exposure.

d) Control measures, their use and maintenance:
   - Users should routinely check that engineering control measures are functioning properly.
• LEV systems must be maintained according to manufacturer’s instructions.
• LEV systems must be thoroughly examined annually by a competent person.
• Where non disposable RPE is used as a control measure it must be maintained, examined and tested according to the manufacturer’s recommendations.

**Note:** The examination of ducted fume cupboards and other room LEV systems is presently arranged by the University’s Estates & Buildings Service. The HMoU is responsible for ensuring arrangements are in place for the examination and maintenance of safety cabinets.

e) **Monitoring potential exposure:**
Greater emphasis is increasingly being suggested by enforcing authorities on the importance of this control measure survey as a confirmation of good practice. Simple suitable techniques are available to monitor chemical airborne contaminants and should be used where:
- Where failure of control measures could result in a serious health effect.
- Where it is necessary to check that a WEL is/has not been exceeded.
- Where it is necessary to confirm the effectiveness of an engineered control measure.

**Note:** The Safety Environmental Protection Service (SEPS) can be contacted for further information regarding monitoring airborne chemical contaminants by telephoning 0141 330 5532

f) **Health Surveillance:**
This control measure is intended to detect the early signs that individual employees may be affected by chemical factors relating to their work and is overseen by the University’s Occupational Health Service (OHS) [www.gla.ac.uk/services/occupationalhealthunit](http://www.gla.ac.uk/services/occupationalhealthunit). It is recommended that this service should be consulted when:
- Personnel are routinely potentially exposed to hazardous substances that are linked to an identifiable disease or adverse health effect.
- There is a reasonable likelihood that the disease or adverse health effect may occur under the conditions of the work activity.
- Where valid techniques are available for detecting such disease and adverse health effects.

g) **Training, Information and Instruction:**
Colleges/Schools/Units must provide those staff, student and visitors undertaking activities with hazardous substances all the information contained in the COSHH assessment and SOP’s relating to their work. Where appropriate training and instruction must be provided to increase each individual’s safety awareness so that they know:
- How and when to use the control measures provided.
- How to use the PPE and RPE correctly.
- How to clean and store re-useable PPE and RPE.
- How to act in an emergency occurring due to uncontrolled events involving hazardous substances.

**Note:** It is recommended that individual Schools/Units produce a local Safety Manual which should be given to personnel and visitors detailing the good practice techniques which should be applied to areas activity undertaken by the School/Unit.

5. **Risk Assessment Process:**
The cornerstone of the COSHH Regulations is that an ‘assessment’ must be undertaken prior to work commencing. HoMU are free to develop COSHH Assessment Forms which they feel best suit their needs. Examples of COSHH forms are available by following the link [www.gla.ac.uk/services/seps/forms/](http://www.gla.ac.uk/services/seps/forms/)
It is recommended that an activity based approach is used to complete the COSHH assessment and that the process is undertaken by personnel who have knowledge, experience and information regarding the risks associated with the activity.

Note: It is strongly recommended that all COSHH Assessments should be formally recorded even those where the activity is considered trivial and only involves a single chemical substance even if this substance’s only hazard property is noted as flammable. Processes such as solvent distillation and the generation of a flammable gas atmosphere such as hydrogen are covered by the Dangerous Substances and Explosive Atmospheres (DSEAR) regulations and a DSEAR Assessment should be completed for this type of work.

a) The COSHH assessment should:
- Consider the chemicals present, used or likely to be produced.
- Identify the properties of these substances.
- Identify the hazards associated with these substances.
- Identify possible exposure routes by which personnel and others may come into contact with the substance.
- Identify all personnel and others which may be at risk to exposure as a result of this chemical activity.
- Take into account personnel with personal physical condition (e.g. pregnant females and staff with known medical conditions).

Note: A substantial amount of information will be provided by Material Safety Data Sheets (MSDS) to assist with chemical identification requirements but these sheets by themselves do not constitute as a COSHH assessment.

b) If risk of exposure is identified the assessment should include:
- Specified control measures put in place to minimise exposure e.g. Fume Cupboards, Safety Cabinets, Local Exhaust Ventilation (LEV) and the type of PPE to be worn.
- Where necessary instructions on how to use the specified control measures.
- The Standard Operating Procedure (SOP) to be followed to ensure exposure is kept to a minimum.

c) If something can go wrong the assessment should include:
- Instructions on how to render the activity safe.
- Contact details of responsible person associated with the activity.
- Actions to be taken in event of spills or accidental vapour/gas release.
- An emergency plan in the event the above cannot be activated.

d) If the COSHH assessment concludes potential for significant health damage based on routine exposure to a hazardous chemical: (Definition of significant and additional information available from) [www.hse.gov.uk/coshh/basics/surveillance.htm](http://www.hse.gov.uk/coshh/basics/surveillance.htm)
- A copy of the COSHH assessment should be sent to SEPS.
- Personnel involved in the activity should be informed of the assessment conclusion.
- HoMU and/or the supervisor should contact OHS to discuss the health surveillance programme that should be implemented.

Note: Health Surveillance is not a substitute for control measures which should be in place to minimise chemical exposure.

e) When should the COSHH assessments be reviewed:
- The COSHH assessment is a live working document.
- Review of the document must be undertaken immediately when evidence of any change to the original protocol is brought about. Examples include, change of chemical, change to reaction conditions and change in personnel undertaking the activity.
Even if no changes have occurred it is good practice to review the assessment and a minimum period of three years is recommended.

6. COSHH Forms:

The University does not have a statutory COSHH form and each HoMU is free to develop a form which they feel best suits the needs of their unit. Samples of COSHH forms are shown in appendix 1. SEPS would recommend that a tick box type form only be used for simple chemical preparations that can be carried on the open laboratory bench.

Note: If required further information and explanation on the content of this guidance can be obtained by contacting SEPS telephone 0141 330 5532.