

Control of Substances Hazardous to Health Procedure

Document Control

Version	Date Document Reviewed	Publication on Web Site	Date of next Review	Summary of main changes
0.1	April 2016	April 2016	April 17	<ul style="list-style-type: none"> ○ Conversion from Policy to Procedure ○ Checked for legal compliance ○ Minor changes to update terminology or to reflect current practices ○ Health surveillance section updated and flowchart removed
0.2	October 2017	October 2017	October 2018	<ul style="list-style-type: none"> ○ Checked for legal compliance ○ Webpage links embedded into relevant text and wording included to direct readers to the Health and Safety webpage for further information
0.3	April 2019	April 2019	November 2019	<ul style="list-style-type: none"> ○ Checked for legal compliance
0.4	August 2021	August 2021	August 2021	<ul style="list-style-type: none"> ○ Checked for legal compliance

Control of Substances Hazardous to Health Procedure

1 Introduction

This procedure forms part of the University's Health and Safety Management System and should be considered in relation to the University's Safety, Health and Wellbeing Policy to ensure that the risks associated with hazardous substances are appropriately assessed and managed to prevent staff, students and others¹ being exposed to hazardous substances through the activities of the University.

This procedure applies to all relevant Schools and Departments within the University. The aim is to outline the requirements of the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended) including the control of Carcinogens and Biological agents by assessing, eliminating or controlling all risks from hazardous substances. This can include a single chemical or compound of chemicals, micro-organisms, biological agents etc.

2 Accountabilities

A key role in implementing this procedure lies with the Executive members and all managers who must ensure the requirements in this procedure are addressed and implemented within their area of responsibility and control.

3 Procedure

Substances Hazardous to Health

The COSHH Regulations apply to a wide range of substances and preparations (mixtures of two or more substances) which have the potential to cause harm to health if they are ingested, inhaled, or are absorbed by, or come into contact with, the skin, or other body membranes. Hazardous substances can occur in many forms, including solids, liquids, vapours, gases and fumes. They can also be simple asphyxiants or biological agents.

A substance should be regarded as hazardous to health if it is hazardous in the form in which it may occur in the work activity. It need not be just a chemical compound, it can also include mixtures of compounds, micro-organisms or natural materials, such as flour, stone or wood dust.

The COSHH Regulations include any:

- a) Substances (including preparations) that have been classified under the Classification, Labelling and Packaging (CLP) Regulations² and the substance is classified as very toxic, toxic, harmful, corrosive or irritant

¹ Others includes students, visitors and contractors where relevant

- b) Substances that have been assigned a Workplace Exposure Limit³ (W.E.L.) as set by the HSE document EH40/2005 (Second edition 2011)
- c) Biological agents, for example, micro-organisms such as bacteria, viruses, fungi and cell cultures if the cell being cultured is hazardous in itself
- d) Dust of any kind except one within (a) or (b) above at a concentration in air equal to or greater than 10mg/m³ of inhalable dust averaged over 8 hours or 4mg/m³ of respirable dust averaged over 8 hours
- e) Other substances⁴ used that could cause a risk to health either because of its chemical or toxicological properties and the way it is used or is present in the workplace

Biological Agents

Biological agents are classified into four 'hazard groups' according to the following infection criteria:

- o their ability to cause infection
- o the severity of the disease that may result
- o the risk that infection will spread to the community
- o the availability of vaccines and effective treatment

The four hazard groups of biological agents and their descriptions are detailed below:

Group 1 – unlikely to cause human disease;

Group 2 – can cause human disease and may be a hazard to employees; it is unlikely to spread to the community and there is usually effective prophylaxis or treatment available;

Group 3 – can cause severe human disease and may be a serious hazard to employees; it may spread to the community, but there is usually effective prophylaxis or treatment available;

Group 4 – causes severe human disease and is a serious hazard to employees; it is likely to spread to the community and there is usually no effective prophylaxis or treatment available.

If the work involves genetic modification of a biological agent, the School/Department will also need to consider the [Genetically Modified Organisms \(Contained Use\) Regulations 2014](#)

Assessment of Health Risks

A risk assessment must be carried out on all substances which are liable to expose anyone within the University to the potential hazards of ill health. Records and information on the results of assessments will be held in an easily retrievable format.

² The CLP Regulations replace the Chemicals (Hazard Information and Packaging for Supply) Regulations (CHIP Regulations) 2009

³ Workplace exposure limits (WEL's) are set by the HSE and can be found in the annually published HSE document EH40/2005 (Second edition 2011)

⁴ Substance – any solid, liquid, dust, vapour, gas, micro organism

In carrying out a COSHH assessment, identify what may be present in the area, for example, processes that emit dust, fume, vapour, mist or gas; skin contact with liquids; substances that have a workplace exposure limit assigned; information from safety data sheets; HSE website; accident records; ill-health etc. For processes that emit hazardous substances, for example, fume from welding or soldering then check the HSE website for information on the relevant industry or trade.

In addition, all Schools/departments must have a comprehensive and up to date list of all substances held, used or produced within their area. This will include material safety data sheets where appropriate.

Where hazardous substances have been identified through this process, a COSHH assessment must be carried out. The **COSHH Assessment** template can be found on the Hazardous Substance section of the Health and Safety webpage.

The main purpose of conducting the assessments is to ensure adequate control measures are in place and to demonstrate that all factors have been taken into account when deciding on the level of risk, the maintenance of the control measures, requirements of monitoring exposure and if necessary health surveillance.

A step by step guide to carrying out COSHH Assessments can be downloaded from the Health and Safety website via the following link <http://www.hse.gov.uk/pubns/books/hsg97.htm>

Any person who carries out assessments must receive adequate information, instruction and training and have a suitable level of understanding of the process in which the substance is to be used. Each School/Directorate or Professional Support Department where necessary, will have a suitable number of staff trained to carry out COSHH assessments. The University COSHH Assessment template should be used when carrying out COSHH assessments.

Any persons who are exposed, or potentially significantly exposed, to any substance, must be informed of the results of the assessments.

Assessments will be reviewed on a regular basis taking the following into account:

- a) A significant change has taken place in how substances are used or amount used.
- b) There is significant change in monitoring results
- c) There has been an accident or report of ill health
- d) New information comes to light
- e) Significant changes in health surveillance results
- f) Changes to examination and test results on engineering controls
- g) There is planned implementation of new or additional control measures
- h) Depending on the level of risk, all assessments will be reviewed after a period of time, with all assessments required to be reviewed at least every five years

- i) There are changes in workplace exposure levels (WELs)

Prevention or Control of Exposure

This is a general requirement to prevent exposure to any substance which is hazardous to health by replacing it for one that either eliminates or reduces the risk to health.

Where this is not reasonably practicable, the risk must be adequately controlled by putting in place control measures that are consistent with the assessment and the activity to control exposure by all routes of entry.

The following should be considered in order of priority:

- the design and use of appropriate work processes, systems and engineering controls and the provision and use of suitable work equipment and materials,
- the control of exposure at source, including adequate ventilation systems and appropriate organisational measures; and
- where adequate control of exposure cannot be achieved by other means, the provision of suitable personal protective equipment in addition to the measures above.

These measures above must include arrangements for safe handling, storage and transport of substances, safe disposal of the chemical waste, the adoption of suitable maintenance procedures, appropriate hygiene measures and reducing to a minimum the number of persons potentially exposed, the level and duration of exposure and the quantity of substances present in the area.

Where it is not reasonably practicable to prevent exposure to a carcinogen or mutagen or prevent exposure to a biological agent using the above controls then the **additional control measures – carcinogens and mutagens** and **additional control measures – biological agents** should also be applied respectively. Details on these can be found on the Hazardous Substances section of the Health and Safety webpage.

In addition to the above, control is only considered to be sufficient under the Regulations if:

- the **principles of good practice** are applied where appropriate. This can be found on the Hazardous Substances section of the Health and Safety webpage.
- any workplace exposure limit (WEL) for a hazardous substance is not exceeded
- exposure is reduced to as low a level as is reasonably practicable where a substance is classified as causing cancer, heritable genetic damage or sensitization

COSHH Essentials sets out basic advice on what to do to control exposure to hazardous substances (excluding carcinogens) in the workplace. It takes the form of straightforward advice in 'factsheets' called 'control guidance sheets'. There are two types of sheets, industry-specific 'direct advice sheets' and 'generic control guidance sheets'. These are available on the Health and Safety website via the following link
<http://www.hse.gov.uk/coshh/essentials/index.htm>

Existing controls should be reviewed on a regular basis and where possible improved.

For substances assigned an WEL, control of exposure will be sufficient as long as exposure is below the WEL in as far as is reasonably practicable. If exposure exceeds the WEL the area must be evacuated, local protocols followed and the Head of Department informed. The Health and Safety Advisor should also be contacted for further guidance.

The Provision of Personal Protective Equipment is the minimum level of protection and / or the last resort, or as an additional measure, personal protective equipment, can be used as long as it is to the correct standard to give adequate protection. Formal procedures should be developed and implemented to ensure control measures such as Personal Protective Equipment (PPE) and any other facility provided are properly checked, maintained and used.

Maintenance, Examination and Test of Controls

All control measures provided must be properly maintained and continue to work effectively as originally intended.

Thorough examinations and testing will be carried out on the specified engineering controls/Respiratory Protective Equipment (RPE) at specified intervals.

For Local Exhaust Ventilation (LEV) systems (e.g. fume cupboards, dust extraction systems for woodworking machines), thorough examinations, including local exhaust velocity measurements must be carried out at least once every 14 months, unless it involves a process listed in Schedule 4 of the COSHH Regulations. This work is the responsibility of the Estates Manager unless the School/Department has assumed this responsibility.

Records of thorough examinations and tests will be kept in the relevant department and within Estates. Records must be kept for a minimum of 5 years from the date on which it was made.

A copy of the [Approved Code of Practice \(ACoP\)](#) can be downloaded from the Health and Safety Executive website.

All control measures in use should be visually checked at appropriate intervals and in the case of LEV and work enclosures, these checks should be carried out at least once a week or where required, before use.

Monitoring Exposure at the Workplace

Monitoring may be required to confirm existing controls are adequate or to identify the level of exposure to substances before, during or after an activity or in a particular area.

Where any substances or process is listed in column one of schedule 5 of the COSHH ACoP monitoring must be carried out at the frequency specified.

A list of the substances/processes that require monitoring must be held in the relevant School/Department. The records of the monitoring results must be kept for at least 5 years and where the monitoring is linked to personal exposures of identifiable persons, 40 years.

Health Surveillance

Appropriate surveillance will be carried out to monitor any member of staff who is liable to be exposed to any substance identified in Schedule 5 of the COSHH ACoP unless the exposure and risk of exposure is not significant.

When staff are identified through exposure to specific materials, referral to Occupational Health for health surveillance should be made by completing the appropriate OH referral form and submitting directly to the OH administrator. Following receipt, OH will arrange an appointment so that the appropriate testing can be carried out.

For any abnormal results, clinical symptoms or significant exposures, OH will arrange referral to OH physician and/or GP, in accordance with clinical indicators. If Health Surveillance indicates that a member of staff has suffered ill health as a result of exposure to any hazardous substance, the individual will be provided with information and advised to talk to his own GP. A letter will be provided to his GP providing information, results and clinical findings of the health surveillance testing. In addition, information on the staff counselling service (PAM assist) will be provided to any affected employee.

Following completion of health surveillance, notification of results will be made to the referring manager, and employee, so that appropriate action can be taken, where indicated. The recommendation provided by the doctor or OH adviser carrying out such health surveillance will be implemented fully. Where the professional opinion of the medical practitioner is to cease further exposure of an individual, the relevant department will take immediate action.

Any member of staff will be allowed full access to their Health Surveillance Records.

Records of health surveillance must be kept for a minimum of forty years from the last entry. (These records are held by Occupational Health).

Surveillance, for identified staff, will be conducted at intervals as defined by clinical guidelines.

Information, Instruction and Training

All staff who are exposed to substances hazardous to health require to be given information, instruction and training on the risks to health created by exposure and the controls and precautions that are required including the use and maintenance requirements of personal protective equipment, any emergency procedures or measures so that they know what to do, the precautions to be taken and when.

Arrangements to Deal with Accidents and Emergencies

Procedures shall be developed and put into place to deal with any foreseeable serious incidents involving the use of hazardous substances.

Instructions will be given to all affected or potentially affected people to enable them to;

- A) Know what to do, and how to protect themselves
- B) Mitigate the effects

- C) Restore the situation to normal

Provisions Relating to Fumigation

If the following fumigations are intended to be used then guidance and approval must be sought and given in writing by the Head of Department (with consultation and guidance from the Occupational Health Advisor).

- 1 Hydrogen cyanide
- 2 Methyl bromide
- 3 Phosphine

Formal procedures for conducting fumigations must be developed and fully implemented and a list of fumigants to be used and formal schedules must be produced. Only trained and authorised staff are to conduct fumigations and appropriate signage must be used.

4 Further Information

A copy of the Approved Code of Practice and guidance for COSHH can be downloaded from the Health and Safety Executive website via the following link

<http://www.hse.gov.uk/pubns/books/l5.htm>