

ROYAL HOLLOWAY, UNIVERSITY OF LONDON

THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 2002 (as amended) 'COSHH' (Version 3)

POLICY

1 Objectives of the Policy

This Policy defines the College's arrangements for the management of hazardous substances as defined in the Control of Substances Hazardous to Health Regulations 2002 (as amended). It requires that the exposure of staff, students and other persons who may be affected by the work of the College to substances hazardous to health is either prevented, or where that is not reasonably practicable, adequately controlled.

To achieve compliance with the Regulations, day-to-day responsibility is placed with each head of department/school/director (hereafter referred to as 'managers'), who will be assisted by their departmental health and safety co-ordinator. They will identify the departmental role of staff and students in ensuring the safe use of potentially hazardous substances and arrange for the Health and Safety Office to provide the training to equip them to undertake their designated tasks.

Where it may lie outside of a manager's level of responsibility to take action to meet the requirements of the COSHH Regulations, which may include funding, the matter must be referred to the next level of management without delay.

The College's "Guidance to the COSHH Regulations 2002" has been produced to provide information on the Regulations and the accompanying Code of Practice. However, it not intended to provide a comprehensive guide to either and reference will, therefore, need to be made to these and other formal COSHH-related documents.

As well as training, an advisory service on the COSHH Regulations is provided by the Health and Safety Office who should be consulted in the event of uncertainty arising over the correct action to be taken, or assistance being required. Compliance with the requirements of this Policy and the accompanying guidance will be monitored by the Health and Safety Office during the health and safety audit process.

2 Organisation and Arrangements for Carrying Out the Policy

In order to meet its statutory obligations, the College has instituted the organisational arrangements detailed below.

a) Heads of Department

Have overall responsibility for implementing arrangements to achieve compliance with the COSHH Regulations within their department, normally in the first instance via their departmental health and safety co-ordinator, and then through the line management structure.

b) Health and Safety Co-ordinators

Undertake on behalf of their head of department, the co-ordination of compliance with the COSHH Regulations, maintenance of departmental COSHH standards and liaison with line managers and other personnel, both within their department and outside e.g. Health and Safety Office personnel.

c) Line Managers/Laboratory Managers

Have the responsibility to implement the requirements of the College 'COSHH' Policy and Guidance and departmental COSHH performance standards, within their area of responsibility. They will ensure that COSHH assessments are undertaken, that their requirements are met on a day-to-day basis and will bring instances in which this may not be possible, or where difficulties are encountered, to the attention of the departmental health and safety co-ordinator.

d) Health & Safety Adviser/Deputy Health & Safety Adviser

Will keep all appropriate personnel advised of developments in legislative and best practice requirements via the department's web site 'Bulletin Box', written communications and the Hazardous Substances Working Group. Will also provide an advisory service on compliance with the COSHH Regulations, run COSHH training and act as Chair/Secretary to the Hazardous Substances Working Group respectively.

3 Departmental 'COSHH' Information/the Departmental COSHH Register

At each separate location in which hazardous substances are in use, a file will be held containing, for each substance, the current, completed COSHH assessment form, safety data sheet, and other relevant information. This must be accessible at all times, being for reference purposes and for use in an emergency by first aid personnel and to accompany a person to hospital; the product safety data sheet would normally be the most relevant in such cases.

Each department using substances hazardous to health as defined in the Control of Substances Hazardous to Health Regulations, is required to maintain a current register of each substance used or held in the department.

4 Annual Disposal of Hazardous Substances Waste

Each department producing waste associated with substances to which the COSHH Regulations relate are required to dispose of it on at least an annual basis. Substances awaiting disposal shall be stored in the College hazardous substances waste store which is under the management of the Superintendent of the School of Biological Sciences.

The Superintendent of the School of Biological Sciences will organise disposal on at least an annual basis; a recharging system is in place for this which is undertaken in accordance with current statutory waste disposal legislation.

5 Information, Instruction and Training

a) New Staff

Under the direction of the departmental health and safety co-ordinator, new staff will receive COSHH induction training before commencing work with potentially hazardous substances. The content will be established from discussions held between

the departmental health and safety co-ordinator and a member of the Health and Safety Office. A similar training programme will be produced for students.

b) Existing Staff

Existing staff will receive refresher training at intervals determined by the Health and Safety Co-ordinator, the frequency and content of which will be established from discussions held with a member of the Health and Safety Office.

6 College Hazardous Substances Working Group

The Group will review compliance with the 'COSHH' Regulations across the College, analyse ways to most effectively implement and develop a coordinated approach to hazardous substance use and the measures required to ensure that potential health issues are adequately identified and managed. It will also review COSHH-related accident/incidents and procedures for the introduction of new substances into the College. The Group will be chaired by the College Health & Safety Adviser, with the Deputy Health & Safety Adviser acting as Secretary.

The Group will meet at least twice per year and formally report to the College Health and Safety Committee.

7 The 'COSHH' Compliance Audit

A health and safety audit will be undertaken of each department within the College on a regular basis occurring at approximately 12 – 18 monthly intervals. An integral part of this audit process is directed at analysing compliance with the COSHH Regulations. The Health and Safety Office, with the assistance of the Occupational Health Physician, will also undertake periodic reviews of substance use and potential exposure to which specific health risks are associated i.e. those which are carcinogenic, mutagenic, allergenic.

The audit will be the formal means of establishing compliance with the COSHH Regulations and this Policy and its accompanying Guidance document. However, it should not detract from internal audit compliance arrangements which departments will implement on an annual basis.

8 Procedure in the Event of an Inadvertent Release of a Hazardous Substance

Each department holding substances hazardous to health shall have in place procedures covering inadvertent spillage or other release arising either from storage, use or transportation. Such procedures will be in writing, accompanied by appropriate risk assessments and all relevant staff and, where appropriate students, will be trained in the operation of the procedures, including the use of control measures e.g. spillage kits. Emergency procedures will be co-ordinated by the departmental health and safety co-ordinator who may delegate these to designated staff as is identified to be appropriate.

Dr Richard Fisk
Health & Safety Adviser
Version 3 (reviewed with no changes)
16th June 2010

ROYAL HOLLOWAY UNIVERSITY OF LONDON

GUIDANCE TO THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH REGULATIONS 2002 (AS AMENDED – 2003 and 2004)

Introduction

This document provides an introductory guide to the Control of Substances Hazardous to Health Regulations 2002 ('COSHH'), as amended. It is intended to provide a summary of the Regulations and managers will, therefore, need to familiarise themselves with the legislation and the Health and Safety Executive's Approved Code of Practice and other relevant documentation. In doing so they will ensure that the use of substances hazardous to health is strictly in accordance with the Regulations and its accompanying Code of Practice. In support of this process, training, guidance and assistance with meeting the requirements of the Regulations will be provided by Health and Safety Office staff.

Copies of the documents referred to in this guidance, together with other reference material, are available from the Health and Safety Office.

The Health and Safety Office provides an advisory service on the COSHH Regulations as identified in the College Policy document. In the event of uncertainty over the correct action to be taken or advice, assistance or training being required, contact should be made with the Office. It will keep all appropriate personnel advised of developments in legislative and best practice requirements via its web site 'Bulletin Box' and FAQ's, written communications and the Hazardous Substances Working Group.

Section 1 – A Brief Guide to the Regulations

COSHH 2002, as amended, applies to a wide range of substances and preparations, including mixtures of two or more substances with the potential to cause harm if inhaled, ingested or where they come into contact with, or are absorbed through the skin. It includes individual chemical substances or preparations such as paints, cleaning materials, metals, pesticides and insecticides. It also includes biological agents such as pathogens, or cell cultures. Substances hazardous to health can occur in many forms, such as solids, liquids, vapours, gases, dusts, fibres, fumes, mist and smoke.

Examples of substances hazardous to health under the Regulations which require COSHH assessments are:

- a) those which would be classified as being very toxic, toxic, harmful, corrosive, irritant, sensitising, carcinogenic, mutagenic or toxic to reproduction, under the Chemicals (Hazard Information and Packaging for Supply) Regulations 2002 (CHIP). In COSHH the term carcinogen also applies to substances and processes listed in Schedule 1 to the Regulations;

- b) those which have been assigned a Workplace Exposure Limit which replace the former maximum exposure limit (MEL) and occupational exposure standard (OES) - see paragraphs 120 to 136 of the Approved Code of Practice;
- c) dust (inhalable and respirable) at a substantial concentration in the air - see paragraphs 15 to 16 of the Approved Code of Practice;
- d) those gases and vapours which, when in existence in sufficient concentrations in the air, act as simple asphyxiants and can present a risk of fire or explosion - see paragraphs 19 to 20 of the Approved Code of Practice. Those flammable asphyxiant gases satisfying the definition of a 'dangerous substance' under the Dangerous Substances and Explosive Atmospheres Regulations 2002 must be risk assessed under that legislation to determine necessary control measures;
- e) biological agents including micro-organisms, parasites, the microscopic infectious forms of larger parasites, etc. – see paragraphs 21, 22 and Schedule 3 of the COSHH Code of Practice;
- f) carcinogens and mutagens - see the COSHH Approved Code of Practice, paragraph 24 and 25 together with the information in Schedule 1;
- g) substances that cause occupational asthma - see Appendix 3 of the COSHH Approved Code of Practice;
- h) any substance not included under a) - g) above, which includes mixtures of compounds, micro-organisms, allergens etc. that may create a hazard to health comparable to any of them – see paragraph 25 of the Approved Code of Practice.

A substance shall be regarded as hazardous to health if it is hazardous in the form in which it occurs in the work activity, whether or not its mode of causing injury to health is known, and whether or not the active constituent has been identified. A substance hazardous to health may not necessarily be a single chemical compound but may include mixtures of compounds, micro-organisms, allergens, etc. For further information see paragraph 26 of the Approved Code of Practice.

From January 2005, all substances will be assessed using the College 'COSHH' Assessment Form and, where applicable, Procedure Assessment Form.

The essential requirements of COSHH are:

- (a) identify hazards and potentially significant risks;
- (b) from the risk assessment, take action to prevent and control risks; and
- (c) keep control measures under regular review.

Section 2 - Principles of Good Practice

The objective of COSHH is to prevent, or adequately control, exposure to substances hazardous to health in order to prevent ill health. Good practice is encapsulated in the

following eight generic principles which must be incorporated into departmental procedures which will be reviewed during the Health and Safety Office audit process:

- a) **design and operate processes and activities to minimise emission, release and spread of substances hazardous to health;**
- b) **take into account all relevant routes of exposure – inhalation, skin absorption and ingestion – when developing control measures;**
- c) **control exposure by measures that are proportionate to the health risk;**
- d) **choose the most effective and reliable control options which minimise the escape and spread of substances hazardous to health;**
- e) **where adequate control of exposure cannot be achieved by other means, provide, in combination with other control measures, suitable personal protective equipment;**
- f) **check and review regularly all elements of control measures for their continuing effectiveness;**
- g) **inform and train all employees on the hazards and risks from the substances with which they work and the use of control measures developed to minimise the risks;**
- h) **ensure that the introduction of control measures does not increase the overall risk to health and safety.**

Section 3 – Implementing COSHH

To meet the detailed requirements of the COSHH Regulations, compliance with the requirements which follow is required in respect of existing substances, before new substances are introduced, or changes to existing substances take place.

- (i) Before any new substance is introduced into the College, a risk assessment, (using the College COSHH Assessment Form, attached as Annex 1) and the product safety data sheet (see page 12), will be conducted. Where a mixture of substances is being used or use of the standard assessment form is inappropriate, the Procedure Assessment Form will be used (attached as Annex 2). Covering all aspects of the use of the substance from delivery to final disposal, the assessment will be conducted by a member of the manager's staff.
- (ii) Only where the risk assessment identifies that it is 'safe' to do so may the substance be introduced into use. 'Safe' in this context means within the bounds of the information, instruction and training, equipment, including air extraction systems, general ventilation, personal protective equipment and health surveillance, that it is reasonably practicable to provide.
- (iii) Where the risk assessment identifies that equipment or facilities are required in addition to those currently provided, then a substance will not be introduced into service until the requirements identified to be necessary by the COSHH assessment have been implemented and it can, therefore, be used safely.
- (iv) Managers will hold a comprehensive list of every substance falling within the requirements of the COSHH Regulations. For each substance will be retained a copy of its completed COSHH assessment sheet, safety data sheet and other relevant information, including a record of the information, instruction and

- (v) Completed COSHH assessments and accompanying product safety data sheets will be held in the immediate vicinity in which substances are in use. This will ensure they are available for reference purposes including use, storage, first aid and such other means as may be determined to be appropriate.
- (vi) Managers are responsible for the disposal of hazardous waste (chemical and biological) in accordance with the requirements of environmental legislation, holding at all times a current list of all substances awaiting disposal. Each disposal container shall clearly display the contents and quantity held therein. Disposal and its costs will be the responsibility of, and co-ordinated by, a member of the relevant Department/Faculty and undertaken at periods not exceeding twelve calendar months or less, if required under specific legislation. Items awaiting disposal must be stored in the formally designated College waste chemical stores; minimum amounts only shall be stored within buildings.

The College Health & Safety Adviser is available to provide such advice and assistance as may be necessary.

Note: Where a work activity may expose personnel to more than one substance hazardous to health, the assessment process must cover the possible enhanced harmful effects of combined or sequential exposures.

Section 4 – The Specific Requirements of the COSHH Regulations

To meet the above objectives, regular reviews of all potentially hazardous substances in use shall be conducted. Those presenting risks in which exposure is likely to present a danger to health shall either be taken out of service, substituted by a substance less hazardous and where neither is possible, action will be taken to control the risks under the sections of the COSHH Regulations that follow.

Regulation 6: Assessment of health risks created by work involving substances hazardous to health.

Using the College COSHH assessment form, attached as Annex 1, and the information provided from the manufacturers safety data sheets (see page 12) and paragraphs 53-56 of the Approved Code of Practice), identify and implement the steps required to ensure the safe use of potentially hazardous substances in all the stages of use from receipt from suppliers, periodic review and eventual disposal.

For carcinogenic substances, the assessment will identify whether they are substances to which the Code of Practice applies and if so, the nature and extent of the risk, in order that it can be used to plan and execute effective control measures and other necessary precautions. For further information, see Regulation 6, paragraphs 50 – 88 of the Approved Code of Practice.

Regulation 7: Prevention or control of exposure to substances hazardous to health.

Take such action as will ensure that exposure to such substances is either prevented or where that is not reasonably practicable, adequately controlled.

In the first instance, this requires the prevention of exposure of employees to substances hazardous to health and only where prevention is not reasonably practicable is it legitimate to resort to the provision of suitable control measures. Control will be secured in the first instance by measures other than personal protective equipment, such as the use of local exhaust ventilation or enclosure of the process. Where such control is found to be inadequate or inappropriate will it be legitimate to resort to personal protective equipment conforming to current product/design requirements. For further information see Regulation 7, paragraphs 89 – 157 of the Approved Code of Practice. Information on face fit testing for respiratory protective equipment will be found in the notes on page 9 of this document.

Workplace exposure limits

Maximum exposure levels and Occupational exposure standards have been replaced by Workplace exposure limits.

The Health and Safety Commission has established workplace exposure limits for a number of substances hazardous to health which are intended to prevent excessive exposure to specified hazardous substances. A WEL is the maximum concentration of an airborne substance, averaged over a reference period, to which employees may be exposed by inhalation. WEL's should not be considered a hard and fast line between safe and unsafe. The degree to which exposure is reduced below the WEL will be proportionate to the health risk. If the principles of good practice for the control of substances hazardous to health are applied correctly, exposure should be below any relevant WEL.

WEL's refer to concentrations of hazardous substances in the air that people breathe, averaged over a specified period of time referred to as the time-weighted average (TWA). Two time periods are used: long term (8 hours), and short term (15 minutes). Short-term exposure limits (STELs) (15 minute reference period), apply to substances that can cause acute effects and the purpose of the short term limit is to protect against the adverse health effect occurring from brief exposures to the substance.

The Health and Safety Executive's publication EH40/2005 *Workplace exposure limits* (revised annually) contains a list of substances assigned WEL's, details of the limit(s) concerned and other essential information including guidance and the approved methods for averaging over the specified reference periods, as well as an explanation of the terms 'respirable' and 'inhalable', together with related material. See the flow chart, Appendix 3.

Substances Not Assigned a Workplace Exposure Limit

Where a substance is not assigned a WEL it does not indicate that it is safe. In such cases, exposure will be controlled to a level to which nearly all the working population could be exposed, day after day at work, without adverse effects on health.

Information on the action to be taken in the event that personal protective equipment is necessary, including its suitability, fit testing of facepieces and other relevant

information is to be found in paragraphs 143 – 153 of the COSHH Approved Code of Practice, together with the Health and Safety Executive’s “Personal Protective Equipment, Guidance on the Regulations” and Section 8(a) “Face Fit Testing” of this document.

Regulation 8: Use of control measures.

Where the use of personal protective equipment or other measures have been identified as the means of controlling exposure, then all reasonable steps must be taken to ensure they are used and applied - see Regulation 8 of the Approved Code of Practice, paragraphs 158 and 159.

All members of staff and students are reminded that they have a duty in law to ensure that the requirements of this policy and departmental safety procedures and instructions are observed at all times. Failure to do so may render them subject to appropriate disciplinary action.

Regulation 9: Maintenance, examination and test of control measures etc.

Control measures must be maintained in an efficient state and working order and in good repair. Where local exhaust ventilation plant is in use, a thorough examination and test of it must be carried out at least once every 14 months (in certain specified cases the interval between consecutive examinations is shorter). Engineering controls and respiratory protective equipment (other than the disposable type) must be examined and tested at suitably identified intervals. A record of all such examinations, tests and any repairs must be kept for inspection for a period of at least 5 years. For further information see Regulation 9, paragraphs 160 – 188 of the Approved Code of Practice.

Regulation 10: Monitoring exposure at the workplace.

Where there is reason to believe that a Workplace Exposure Limit is to be exceeded or adverse health affects are likely to occur as a result of exposure to occur from a substance, then in accordance with methods and a programme established with the College Health & Safety Adviser, ensure that the methodology is established to adequately monitor and control exposure of persons to substances hazardous to health and that it is monitored at appropriate frequencies. A record will be held in each department by the Health and Safety Co-ordinator, of substances requiring health surveillance.

Health Surveillance, undertaken by the College’s Occupational Health Physician, will be organised by the Health and Safety Office and records of health surveillance held by the department and Health and Safety Office. Records of such monitoring will be maintained for identifiable persons for 40 years and in other cases for at least 5 years, in the Health and Safety Office.

For further information see Regulation 10, paragraphs 189 – 213 of the Approved Code of Practice.

Regulation 11: Health surveillance.

Health surveillance will be undertaken in the event that workplace exposure is such that an identifiable disease or adverse health effect is likely to occur under the

conditions of the work and where there are valid techniques for detecting indications of the disease or its effect.

The use of certain substances (e.g. asthmagens) carries a strict requirement to conduct health surveillance. Managers are, therefore, required to liaise with the College Health & Safety Adviser and its Occupational Health Physician will undertake such health surveillance as is identified to be necessary. The post holder will retain such health records as are required to be kept. Staff must be provided with the results of any monitoring of exposure that takes place, and the collective results of health surveillance undertaken.

For further information on health surveillance see Regulation 11, paragraphs 214 – 241 of the Approved Code of Practice.

Regulation 12: Information, instruction and training for persons who may be exposed to substances hazardous to health.

Staff and other personnel who may be exposed to substances hazardous to health must be provided with such information, instruction and training (including refresher training) as is suitable and sufficient for them to know and understand the risks to health created by exposure. This will include the precautions identified to be necessary to ensure their safe use. For further information see Regulation 12, paragraphs 242 – 264 of the Approved Code of Practice.

Reviews of each assessment are to be undertaken at least once every two years but also prior to changes in the use of substances taking place, new substances being introduced, or changes to product safety data sheets taking place. Changes to control measures identified to be necessary shall be introduced before the use of substances takes place.

Regulation 13: Arrangements to deal with accidents, incidents and emergencies.

Managers will ensure that procedures are in place to protect the health of personnel from an accident, incident or emergency related to the presence of a substance hazardous to health at the workplace. This will require, for example, the provision of appropriate first-aid facilities and relevant safety drills (tested at regular intervals), information on emergency arrangements and warning and other communication systems. For further information, see Regulation 13, paragraphs 265 – 290 of the Approved Code of Practice

Section 5 - Departmental COSHH File

Within each department and area of work presenting identifiable risks to health, a “COSHH” file will be made available for the use of staff and, where applicable, other persons such as first aid attendants, students, visitors and contractors. Such files shall contain, for each hazardous substance:

- a) the manufacturers product safety data sheet;
- b) the completed COSHH assessment form;
- c) a record of the controls to be used (personal protective equipment being the last resort);

- d) full details of the training provided for each member of staff or student for each hazardous substance, including their signature confirming that they have been so trained.

Section 6 - The Role of the Health & Safety Office

The College Health & Safety Office will provide such information, help, advice, training and interpretation of the Regulations as may be necessary to enable the safe use of substances and, therefore, compliance with the Regulations, to be met.

The duties prescribed under this Policy and Procedure are designed to ensure the safety of personnel. The Health & Safety Adviser will submit to the Principal an annual report of compliance with its requirements.

Section 7 - The Role of Safety Representatives and the Health and Safety Committee

Safety Representatives play an essential role in the achievement of the above objectives by reviewing departmental compliance with the Regulations, drawing managers attention to any deficiencies and working with them to achieve the safe use of potentially hazardous substances.

The Health and Safety Committee shall keep under review compliance with the Regulations and this Policy, receiving such reports or other information as they consider necessary to ensure that a satisfactory standard is being achieved. In doing so, they will take into account staff, students and visitors to College premises.

Section 8 – Definitions of Terms Used in this Document

(a) Face Fit Testing See COSHH Code of Practice, Regulation 7 and pages 5/6 of this document.

Respiratory protective equipment with a tight fitting facepiece (filtering facepieces, half and full-face masks) requires a good contact between the wearer's skin and the face seal of the mask, other factors will also need to be considered. A competent person will be required to undertake face fit testing which will be conducted on a quantitative and qualitative basis. Further information will be found in the Health and Safety Executive publication, *The selection, use and maintenance of respiratory protective equipment: A practical guide* and *Fit testing of respiratory protective equipment facepieces*, copies of which are available from the Health and Safety Office.

(b) Chemicals Supplied by the Manufacturer - Labelling

If a dangerous chemical is supplied in a package, the package must be labelled. The aim is to inform anyone handling the package or using the chemical about its hazards and to give advice on the precautions, For those using the substance, the label is a supplement to information provided by the employer, for others it is a major way of conveying essential information. The label must always contain details about:

- (a) the supplier
- (b) the chemical
- (c) the category of danger, and
- (d) risk phrases and safety phrase

(c) Safety Data Sheets and Risk Phrases

One of the most important requirements of the Chemical (Hazard and Information and Packaging for Supply) Regulations 2002 (CHIP), is for safety data sheets to be provided for dangerous chemicals which are supplied for work. The safety data sheet has to contain information about the chemical to enable the recipient to take the right precautions. The Approved Code of Practice on Safety Data Sheets gives advice.

The safety data sheet will be invaluable in helping to carry out a COSHH assessment. It is not a substitute for an assessment; safety data sheets will describe the hazards of the chemicals but only the user can assess the probability of the danger arising (i.e. the risk) in the workplace.

Safety data sheets have to be provided whether the chemical is sold in bulk or in packages. They do not have to be provided when chemicals are sold for private use through shops; there is other legislation which requires suppliers to provide information in these cases.

Safety data sheets contain Risk Phrases and Safety Phrases which are standard phrases (see Appendix 4) set out in CHIP. Risk phrases describe the dangers of the chemicals in more detail, e.g. "May cause cancer" or "Toxic by inhalation". Safety phrases tell the user what to do, or not to do, with the chemical, e.g. "Keep away from children" or "Do not empty into drains".

(d) "Reasonably Practicable"

Where the term *reasonably practicable* is used, the following definition shall apply: Place on one hand the quantum level of risk and on the other the money, time, or trouble involved in averting the risk. If there is a gross disproportion between them with the risk being insignificant in relation to the sacrifice then you will have proven that compliance was not reasonably practicable.

Dr Richard Fisk
Health & Safety Adviser
Version 3 (reviewed with no changes)
16th June 2010

'In accordance with the College's commitment to equality and diversity, this Policy has been written and screened to avoid discrimination and promote a positive approach to race, disability and gender issues. Comments on the content of this document should be directed to Mrs Leanie DuToit in the College Health and Safety Office.'