

OCDEM, Churchill Hospital, Oxford OX3 7LE

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Local Safety Rules: Clinical and Laboratory Work Containment Level 2

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1. General Arrangements

Under the Health and Safety at Work Act, 1974, it is the legal responsibility of the employer to ensure the health, safety and welfare of each individual while they are at work. The employer must provide a safe workplace, ensure safe systems and working practices and provide safe equipment or machinery. In the University this responsibility is devolved to Heads of Department.

It is the responsibility of individuals to co-operate fully in all matters of safety and to comply with any arrangements set out for their own, and others, health and safety while in the department. All staff must therefore make themselves familiar with all guidelines; obtain more detailed information from the sources given in *section 1.v* when required; and ask the DSO or laboratory safety representative for the area in which they work (names are listed in OCDEM's Statement of Health and Safety Organisation), for further instruction or explanation if they are unsure about any aspect of their safety while at work.

There is a Statement of Health and Safety Organisation for OCDEM, which clearly sets out the safety arrangements in place for the building, and names those members of staff who have a specific safety role.

1.i. Access

Access to the department is via an electronic swipe card. Each swipe card is individually programmed to allow access only to those areas of the department that allow staff, students or visitors to undertake his/her duties.

Access cards must not be lent to others and in the event that a card is lost or damaged security must be informed via OCDEM's Personnel Administrator), so that the card may be deactivated or deleted from the system. All staff should be security aware and mindful of the possibility of 'tailgating' when they are entering the department.

Short-term visitors should be accompanied by their host, or other authorised member of staff, while they are in the department.

Long term visitors may be issued with an access card to facilitate their stay and must attend a full OCDEM safety induction (*see section 3.i*). Such cards must be surrendered to the administration team on departure.

All OUH NHS Trust personnel should liaise with a named member of staff for entry to the department where necessary, and they should report to this person when they are leaving the premises.

Outside contractors or visiting engineers must liaise with a named member of staff where access is required for servicing or repair of departmental equipment. Engineers should be accompanied and supervised carefully whilst in the department. The requirement for engineers to be accompanied at all times may be waived, provided they have received a safety induction, information on the hazards of the area, and have been issued with and signed a

hazardous areas 'permit to work'. Permits to work are located in a folder named 'Information for maintenance and repair staff' which is kept on the first shelf above the 'Safety Station' in laboratory F40.

1.ii. Accidents

All accidents should be reported to either the laboratory safety representative for the area, your supervisor or the Department Administrator and the DSO; all accidents, incidents and near misses must be entered in the Accident/Incident report book as soon as possible.

The accident/incident book gives fuller instructions on how to deal with accident reports. The accident/incident book is kept inside the accident folder; this and the folder are located on the 'Safety Station' in lab F40, there are additional forms outside the administration office on the second floor of phase 2 and in the Clinical Research Unit.

The accident/incident form should be completed by yourself, unless you are unable to do so, in which case either your supervisor or the DSO will do this on your behalf. The form needs to be signed by your supervisor, the DSO or the OCDEM Administrator. The top copy of the accident/incident report form should then be sent to the University of Oxford Safety Office (the DSO will do this for you, if the DSO is absent the OCDEM Administrator or Personnel Administrator will deal with the form). The Department copy must be removed from the book and given to a member of the Administration/Personnel staff so that it can be filed in their office (located on the second floor of phase 2).

Major incidents and any injuries or dangerous occurrences that have to be notified in accordance with RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) will be done so by the University Safety Office. There is a copy of University Policy Statement [S1/14: Accident, Incident, Disease and Near miss Reporting](#), which gives more information, in both the accident folder and in the folder that holds the University Policy Statements (see below for location). In the event that an accident qualifies as a reportable accident, according to these specific guidelines, the Safety Office should be notified immediately.

1.iii. Arrangements for First Aid

There are several people trained in First Aid within OCDEM. They all hold the relevant 'First Aid at Work' certificate that is obtained through an extensive training course run by St. John's Ambulance or the South Central Ambulance Service NHS Trust or are registered nurses. The trained First Aiders are listed in the Statement of Health and Safety Organisation.

There is a first aid box located either within each laboratory or the lobby to each laboratory. These are checked regularly and the records are kept as listed in 'Record keeping' (*section 11.4*).

There are emergency eye wash stations located in the laboratory lobbies.

The emergency eye showers must be left running for five minutes once a week in order to clear the system of any possible Legionnaires' disease bacteria. A record is kept of when each shower is run on a sheet of paper located on the wall above each eye wash. When full the record sheets are kept as listed in 'Record keeping' (*section 11.4*).

1.iv. Occupational Health

All laboratory staff must register with the University Occupational Health Service if they are likely to be exposed to substances that can cause an identifiable disease or adverse health effect, for example human blood or tissues, pathogens, animals, certain chemicals. This includes visiting workers even if they only expect to stay for a short time. Staff should complete form HS1: Control of Substances Hazardous to Health (CoSHH) Health Surveillance Registration Form. The form should be returned to either the DSO or the

personnel officer who will forward it to the DivSO. Immunisation against hepatitis B is highly recommended for all staff working with human blood products or other material of human origin.

1.v. Sources of information

The following sources of more detailed information will be kept in:

Phase 1:

Room F40 on the Safety Station

- University Policy Statements and Guidance Notes. A list of the contents are posted on the safety notice board, which is located in the first floor corridor between the phase 1 and 2 laboratories.
- University Policy Statement S5/09: Biorisk Management.

Phase 2:

First floor: main laboratory

- University Policy Statements and Guidance Notes. A list of the contents are posted on the safety notice board, which is located in the first floor corridor between the phase 1 and 2 laboratories.
- University Policy Statement S5/09: Biorisk Management.

They are for the use of all staff.

In addition to these each Group should maintain up to date copies of Standard Operating Procedures, Risk Assessments and CoSHH assessments (where required) for all procedures undertaken in their laboratories. These should be available for all those within their Group to access at all times.

Electronic copies of OCDEM Safety documents can be found on the 'Shared' network drive, in a sub-directory called 'OCDEM SOPs, policies and risk assessments'. This sub-directory contains several other sub-directories with names that are self-explanatory.

2. Fire Precautions

The specific procedures to be followed in the event of a fire are detailed in a separate document: the OCDEM Fire Policy, which is issued to all staff. This covers the alarm system, the evacuation procedures, the assembly point and the mechanism for controlled re-entry to the building. All new members of staff must ensure that they are fully aware of the emergency procedures and the identity of all the department's fire officers. As OCDEM is located in a NHS building and fire safety is managed by the NHS, it is a mandatory requirement for all staff and students (and long term visitors) to undergo annual fire training, as required by the NHS.

3. General Safety

3.i. Supervision, induction and training

Supervisors are identified in health and safety law as those with a supervisory function, therefore the term is not confined to academic supervisors. Supervisors carry responsibility for safety matters and have a legal duty to manage risks appropriately. The duties of supervisors are set out in University Policy Statement [S1/09: Supervisors' Responsibilities](#).

New staff and visitors must be introduced to laboratory work via an assessment process by the supervisor, and via appropriate training. A form for assessment by the supervisor is attached

as Appendix 1. Each new worker or visitor must both attend a formal Health and Safety induction lecture (organised within OCDEM), and undergo specific laboratory training as determined by the supervisor's assessment. Since the Health and Safety induction lectures occur monthly, rather than on demand, it is accepted that laboratory work may begin once specific laboratory training has been given, but a lecture should be attended as soon as possible. All training must be recorded in the staff member's training record.

3.ii. Risk Assessment

- Under the Management of Health and Safety at Work Regulations there is a general requirement to assess all work activities for risks. Additional legislation then details the specific requirements to be met, for example, harmful agents (CoSHH), display screen equipment (DSE), work equipment (PUWER), manual handling (MHO).
- Laboratory procedures are assessed and the findings of any risk assessment are considered as part of the training programme for all new members of staff. Trainees are expected to familiarise themselves with all the necessary controls in place for the procedure, and to comply fully with any arrangements set out for their health and safety.
All new procedures must undergo a preliminary risk assessment before work commences, this must consider all aspects of the procedure, not just the reagents; this preliminary assessment will form the basis of the full risk assessment.
- All female members of staff who become pregnant must inform their supervisor or DSO as soon as they are aware of their pregnancy, so that a formal written risk assessment can be undertaken. This also applies to nursing mothers returning to work after a period of maternity leave.
If the worker is a registered radiation worker they must inform the Senior Radiation Protection Supervisor (SRPS), currently Sandy Humphreys, in writing as soon as they are aware of their pregnancy.
Advice must be sought when the expectant or new mother handles any of the following:
 - a. Viruses capable of infecting human cells
 - b. Carcinogens, mutagens or teratogens
 - c. Volatile Solvents
 - d. Radioactivity
- DSE Regulations require that workstation risk assessments be performed for members of staff or post graduate students who use DSE as a significant part of their work. Most people are familiar with computer workstations but the regulations include liquid crystal displays and other items of laboratory equipment with similar ergonomic considerations, such as microscopes.
The majority of workers in OCDEM would qualify as DSE 'users'; the department's DSE assessors' co-ordinator will contact you within a short period of commencing your post to inform you of the website to visit to perform a self-assessment. If you wish to discuss the regulations or get advice on your rights to eyesight testing speak to your Groups DSE assessor.
- Other risks to be aware of are: manual handling, working at height, lone working, CoSHH. This list is not exhaustive and all procedures should be assessed to determine whether or not there is a risk associated with it.

3.iii. Housekeeping

- All office, laboratory and general work areas must be kept clean and tidy, and clear of clutter. Waste should not be allowed to accumulate but must be disposed of as soon as possible.
- All thoroughfares and points of access or egress must be kept clear at all times. Fire doors must not be blocked or propped open.
- The storage of items at high level should be minimised as far as possible, but where necessary these should be accessed by kick stools or ladders, as appropriate. Only light weight items should be stored at height and benches or low shelves reserved for heavier items of equipment.
- All electrical cables should be raised from the floor where possible, or otherwise stowed in some fashion to prevent damage to the cables or potential for trips and falls.
- Electrical sockets and switches must be kept off of the floor to avoid them getting wet in the event of a flood.
- All electrical equipment should be used according to manufacturer's instructions. When leaving the department, ensure that all non-essential equipment is turned off. This includes computers, monitors and photocopiers. Remember to switch off lights as you leave.
- At all times consider your co-workers and do not leave anything that might endanger them. Remember that either an 'act' or 'omission' can place others at risk.

4. General Rules of the Laboratory

- No eating or drinking is permitted in laboratories, and no smoking anywhere within the building.
- Pipetting by mouth is forbidden.
- No work should be undertaken for the first time unless the relevant risk assessment has been performed.
- White coats and safety spectacles will be worn for all laboratory work and lab coats must be changed immediately when known to be contaminated.
- White coats should be removed when leaving the laboratories and must not be worn elsewhere.
- Laboratory coats must be changed regularly and laundered by the appropriate route; see SOP SI: Laboratory Safety Rules for Handling of Blood and Other Body Fluids: Containment Level 2.
- Disposable gloves must always be worn when performing laboratory work or while taking and handling samples from patients or volunteers; these must be changed immediately when known to be contaminated.
- Single use, disposable items must not be re-used.
- Wear gloves, sensible, full cover footwear and eye protection (which is a mandatory requirement) when dealing with hazardous chemicals.
- Blood-taking is only to be performed in the Clinical Research Unit (CRU) and not to be performed in the laboratory. Venepuncture can only be performed by clinicians or fully trained and certificated staff. Consent forms must be completed and records kept.
- All solutions or other materials must be labelled with the contents, the date of preparation and preferably the name or initials of the person responsible. If the

contents of a container are hazardous, this should be clearly indicated. When pouring a solution from a bottle, keep the label uppermost. Stock chemicals NOT in their original containers must be discarded.

- Spillages should be dealt with immediately. They should be cleared up wearing full protective clothing, i.e. white coat, gloves, eye/face protection. All waste resulting from the spill must be disposed of in accordance with the departmental policy. Comprehensive instructions on all Containment Level 2 laboratory procedures and policies for handling spills are documented in SOP S1 and S2.
- All work stations and equipment must be decontaminated and cleaned at the end of each work session, in line with departmental policy. See SOP S1 and S4.
- Hands must be washed before leaving the laboratory.
- If you are the only person in the department do not undertake any hazardous procedures.
- If samples are to be transferred from the CRU to the laboratory the samples must be transported in a suitable container that will ensure no breakage or spillage will occur if the samples are dropped.

5. Waste disposal

Wherever possible laboratory waste is to be segregated and recycling is to be encouraged. Only items that are not contaminated can be recycled or placed in the domestic waste stream. Full details relating to waste disposal are included in OCDEM SOP S3: Waste Disposal.

Hazardous waste includes all clinical waste, such as syringes, needles, blood tubes, tissue paper used for mopping up blood spills; chemical waste such as solvents, corrosives, toxins, carcinogens ; computer monitors containing cathode ray tubes, batteries; refrigerated equipment etc. This list is not exhaustive.

All clinical waste must be disposed of via the clinical waste stream. See SOP S3 for further details.

All non-clinical hazardous waste must be disposed of via the hazardous waste route, which is coordinated by the DSO and managed by the University Safety Office. Notify the DSO if you have any hazardous waste to be disposed of.

All containment level 2 laboratory procedures and safety policies must be adhered to when handling waste for disposal. Refer to SOP S1 & S3.

6. Disinfection

All containment level 2 laboratory protocols and safety policies must be adhered to when dealing with disinfection issues. See SOP S1 and S4 for full details.

A decontamination certificate must be provided for engineers before they maintain any equipment.

7. Storage of flammable solvents

Limited volumes of flammable liquids are permitted to be stored within the laboratory, and this must be kept in locked 'fire-resistant' cupboards. Anyone ordering flammable solvents should check existing stocks to see if our limit will be exceeded.

Note that chloroform is not flammable and does not need to be taken into consideration for this purpose.

Stock bottles of flammable material should not be left on benches or in fume cupboards. Up to 500ml of 'working solution' of a flammable solvent is allowed to be on the bench.

No flammable solvents are to be stored in fridges or freezers, unless these are spark proof (and signed appropriately).

All containment level 2 laboratory procedures and safety policies must be adhered to when storing and handling flammable solvents: refer to SOP S1.

8. Transportation and storage of samples

The transport of biological material by road or by air must comply with the relevant legislation. The transport of infectious materials and other dangerous goods is subject to stringent packaging and labelling requirements. Only individuals trained in the transportation of dangerous goods are allowed to do so. Safety officers must be contacted, in the first instance, if such material is to be shipped.

Further information is provided in [UPS S1/15 'Transport of dangerous goods'](#) and in University Policy Statement S5/09.

All samples stored in freezers must be in suitable primary containers. An appropriate form of secondary containment must also be used such that in the event of a freezer break down and complete thawing of contents the samples cannot leak and contaminate either the equipment or other users. A good racking and inventory system is required so that during a freezer break down the contents can be easily relocated and racked in alternative facilities.

Human tissue samples and other relevant material as defined by the Human Tissue Authority are stored within OCDEM by various Groups. When storing human material, other than plasma that has been centrifuged to remove cells, please refer to OCDEM SOP I9: 'Sample Logging, Storage and Tracking for the Purposes of Research', to ensure you are adhering to the mechanisms and procedure required for the storage of human material.

9. Personal Protective Equipment

All PPE must be 'fit for purpose' and be marked with the appropriate BS or EN standard. For example, full face visors suitable for use when handling liquid nitrogen are not always suitable for use as UV face shields. Where PPE has been identified as necessary it is important to check that the correct equipment is being used.

Where PPE is provided for an individual's use, e.g. safety spectacles, it is up to the user to ensure that these are kept free of contamination and undamaged. If a fault is identified then the safety officers should be informed and new equipment provided.

Where PPE is provided for communal use, a range of sizes should be available to ensure a good fit for all potential users. This includes face shields, safety visors, cryogloves, thermal gloves, ear defenders. All PPE must be stored away from potential contamination or damage and be checked regularly to ensure that it remains in good condition. A record should be kept of all checks. If any problems are identified with PPE then the safety officers should be notified immediately.

10. Out of hours work

Normal working hours are classed as 7am – 6pm.

Persons carrying out general office duties, including computer work may do so when they are on their own within the department.

Laboratory activities involving any form of risk that is greater than that involved in general office duties should only be undertaken with others present or at least within ear shot (in case of an accident).

Out of hours/lone working are considered as part of the risk assessment process and supervisors must ensure that workers have been trained appropriately and that they have attained the appropriate level of competency before they are permitted to work out of hours.

If it is necessary for laboratory work to take place outside normal working hours, final permission must be obtained from your supervisor, or the DSO in his/her absence.

11. Special arrangements

11.i. Ionising Radiation

Specific arrangements for the use of radionuclides and x-rays in the building are dealt with separately by the Senior Radiation Protection Supervisor. The rules relating to the use of radiation are considered as part of a comprehensive training programme and are dealt with as necessary. See OCDEM Local Rules for Laboratory Work with Radioactive Materials.

11.ii. Lasers

There are Class 3 and 4 lasers located within the Rorsman laboratory within OCDEM. Only those trained to use the equipment of which these lasers are an integral part are allowed to use this equipment. Users must conform to all the instructions included in University Policy Statement S2/09: Laser Safety. The laser safety supervisor must be consulted if you wish to be trained to use this equipment.

11.iii. Liquid nitrogen

The storage of samples in liquid nitrogen and the handling of liquid nitrogen generally are subject to stringent local rules. All personnel requiring access to Liquid N₂ storage vessels must undergo full training in all aspects of liquid nitrogen handling. The protocols for usage are documented in SOP S6.

11.iv. Genetic Modification

There are special requirements for work involving genetic modification. In all cases approval for the work must be sought from the OCDEM GM safety committee before work commences and in some instances projects may also need to be notified to the Health and Safety Executive. It is imperative that the BSO is contacted in advance of any work being undertaken. There are also special arrangements for the disposal of GM waste and workers will be advised of these during the appropriate training sessions.

11.v. Record keeping

Records have to be kept of the following:

Contents of the First Aid cabinets and dates when the stocks are checked.

Flushing of the eye wash showers.

Inspections of personal protective equipment.

The locations of these completed records are:

Phase 1

F40/F19/ room F40 'Safety Station'

F25: office within F25

Phase 2

Ground floor Rorsman Laboratory

First floor Thakker Laboratory

Appendix 1

**Oxford Centre for Diabetes, Endocrinology & Metabolism
Safety Registration and Supervision Assessment Form**

	To be completed by all new staff, students or visitors who intend to work in the laboratories	To be completed by Supervisor
	Will your work involve any of the following: Delete as appropriate and supply brief details	Supervision category and name of immediate supervisor if cat. A
Radioactive isotopes	Yes/No	
Human blood, tissue or body fluids	Yes/No	
Using centrifuges	Yes/No	
Using liquid nitrogen	Yes/No	
Biological hazards	Yes/No	
Dangerous pathogens	Yes/No	
Genetic modification	Yes/No	
Animal handling	Yes/No	
Lasers	Yes/No	
Work outside the department	Yes/No	

Supervision Categories:

A Where work may not be undertaken without senior supervision.

B Where work may not be started without advice from a senior supervisor. Advice should include the method of work and the safeguards to be used.

C Where the risks (other than those in categories A & B) are such that care must be observed, but where it is considered that the worker is adequately trained and competent in the procedures involved.

Declaration by Supervisor:

Having specialist knowledge in the field of work to be carried out by the applicant, I believe that he/she has properly declared the circumstances under which his/her work will be undertaken. I have indicated the category of risk involved, and have named the person(s) who will immediately supervise work in Supervision Category A and risk assessments have been completed where appropriate.

Name(Print).....Date.....

Signed.....

Declaration by Applicant:

I have read and understood the OCDEM Local Rules and agree to adhere to them.
I will read and adhere to the contents of the Risk Assessment/CoSHH forms for each of the protocols that I will be using before first use.

Name (Print).....Date.....

Signed.....

Please copy the form and declaration and give copies to your supervisor or DSO who will ensure it is given to HR for filing in your personnel file.

Document approved and accepted by the Chair of OCDEM Safety Advisory Committee

Signed *Frage*
Prof. Fredrik Karpe

Date:..... *30/6 2015*

Version	Date	Reason for update	Updated/reviewed by :	Date next review due
1	Oct 2003	New SOP	Author: SMH, accepted by OCDEM SAC	Oct 2004
1	Sept 2004	No changes required	Reviewed by SMH	Oct 2005
1	Oct 2005	No changes required	Reviewed by SMH	Oct 2006
2	Sept 2006	Changes to names and health surveillance registration	Updated by SMH Accepted by OCDEM SAC	Sept 2008
3	Jan 2009	Changes to names and text, inclusion of safety specs as mandatory requirement.	Updated by SMH Accepted by Chair of OCDEM SAC	Jan 2011
4	Dec 2009	Introduction of section to cover supervision, induction and training, plus other minor updates to text	Updated by SMH & KNF Accepted by Chair of OCDEM SAC	Jan 2012
4	Mar 2012	No changes required	SMH	Mar 2014
4.1	30 June 2015	Updated text to reflect current personnel and links. New Department header added	Updated by SMH Accepted by Head of Safety	June 2017