



THE UNIVERSITY OF
NOTRE DAME
A U S T R A L I A

GUIDELINES:

HANDLING BLOOD PRODUCTS AND OTHER HUMAN BIOLOGICAL MATERIAL

Purpose: To outline the University's policy and procedure for the handling of blood and other human biological materials by staff and students.

Responsible Office: Legal Office

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1 Introduction and purpose

- 1.1 These guidelines *Handling Blood Products and Other Biological Material* (“Guidelines”) establish standard laboratory practices and procedures and aim to ensure that staff members and students of The University Notre Dame Australia (University) who are required to handle human biological material in the course of their employment or studies do so in a safe manner and minimise any risk of infection.
- 1.2 These Guidelines must be read in conjunction with any relevant University policies, procedures and other guidelines as may apply from time to time.

2 Definitions

For the purposes of these Guidelines:

- 2.1 **Human biological material** means any material from a human source including, but not limited to, blood, blood products, urine, hair samples and saliva; and
- 2.2 **University laboratory** means any laboratory on any campus of the University.

3 General Principles

- 3.1 In accordance with safety and health legislation, staff members are responsible for their own health and safety and are required to take reasonable care to avoid adversely affecting the health or safety of another person.
- 3.2 Any staff member or student who may come into contact with human biological material in the course of their employment or studies is responsible for familiarising themselves with these Guidelines and any associated guidelines or procedures specific to their School or Department.
- 3.3 Staff members teaching units which involve the use of human biological material should remind students of the existence of these Guidelines as part of the introduction to the unit and advise students that they are required to read and familiarise themselves with these Guidelines prior to dealing with any human biological material.
- 3.4 Staff members responsible for supervising laboratory sessions involving the use of human biological material must ensure that students use the appropriate protective equipment correctly and follow the correct procedures.
- 3.5 Human biological material should always, as a matter of best practice, be treated as if they are hazardous with the potential to cause infection.

4 Avoiding contamination and use of protective barriers

- 4.1 When handling human biological material, staff and students must take standard precautions and wear protective clothing appropriate to the task being undertaken which may include gowns, laboratory coats, disposable aprons, face shields and safety glasses. Non-disposable coats or gowns should be washed routinely in the laboratory with the detergent provided.
- 4.2 Gloves must be worn as a single-use item for any activity that has been assessed as carrying a risk of exposure to blood, body substances, secretions, excretions, or other potentially hazardous human biological material. When gloves are removed their external surface should not come into contact with the skin.
- 4.3 Safety glasses or face shields must be worn during work where there is a risk of generating splashes or sprays of human biological material into the face and eyes.
- 4.4 In addition, staff members and students should take the following precautions to prevent contamination:
 - 4.4.1 carefully cover any cuts or abrasions with a waterproof bandaid or bandage prior to coming into contact with any biological materials;
 - 4.4.2 avoid making contact between a glove, hand or equipment and their or anyone else's skin, hair or mucosal surfaces (mouth, nose and eyes); and
 - 4.4.3 avoid swallowing or inhaling the material.
- 4.5 Staff members and students should avoid contaminating equipment, furniture or other items by touching them with soiled material or gloves. If contamination occurs, the relevant procedures for managing exposure and surface cleaning set out in clauses 7 and 8 should be followed.
- 4.6 Hand hygiene must be performed after any laboratory session where human biological materials are used, including after the removal of protective gloves. Hands must be washed using soap and water and then an application of an alcohol-based hand rub that contains between 60% and 80% v/v ethanol or equivalent.
- 4.7 Any staff or students who have any infection that could be spread through their blood must not participate in exercises where their blood is taken.

5 Storage and disposal of human biological material

- 5.1 Human biological material collected or purchased for the purposes of teaching and research will often need to be stored for varying degrees of time prior to and during use and must be stored in accordance with these Guidelines.
- 5.2 Human biological material to be stored for short periods (up to 7 days) should be stored at 4°C.
- 5.3 Human biological material to be stored for long periods (more than 7 days) should be stored at -20°C.
- 5.4 Fridges must be reliable and backup options must be available in case of failure.

- 5.5 Human biological material must always be bagged or otherwise sealed and labelled with commencement date of storage, manufacturers use-by information, and any other instructions if supplied.
- 5.6 Non-preserved human biological material must only be retained for as long as required, up to a maximum of one semester, before being disposed of in accordance with these Guidelines.
- 5.7 Human biological material preserved in alcohol or formaldehyde may be stored indefinitely in sealed containers in a secure, well ventilated, dry storage space. Large specimens for which large quantities of alcohol or formaldehyde are used must be stored in a flammables cabinet.
- 5.8 Low hazard preserved, dried, freeze dried or embedded human biological material may be stored indefinitely and must be boxed, labelled and stored in a storeroom.
- 5.9 Any human biological material that presents a possible hazard must be stored in a commercial plastic, labelled biohazard bag.
- 5.10 Any human biological waste must be disposed of in plastic biohazard waste bags and placed in the allocated medical waste bin for pick up by the University contracted service provider. The laboratory technicians are responsible for removing sealed waste to the medical waste bins on campus.
- 5.11 Any equipment used in the handling of biological material must be washed and sterilised using ethanol or bleach. Instruments must be sterilised in the autoclave. Large items must be hot washed in the laboratory rated washer.

6 Handling of sharps

- 6.1 Sharps must only be used once before being disposed of in accordance with these Guidelines.
- 6.2 Sharps must not be passed directly from hand to hand and handling should be kept to a minimum.
- 6.3 Needles must not be recapped, bent or broken after use.
- 6.4 Any person who uses a sharp is responsible for its immediate safe disposal in the approved sharps container.
- 6.5 Sharps containers must not be filled above the mark that indicates the bin is three quarters full. Containers should be sealed when three quarters full and removed to the medical waste bins by the laboratory technicians.
- 6.6 Containers provided for the disposal of sharps must be clearly labelled, accessible, and be designed so that it can easily be determined how full the container is at any given time.

7 Managing exposure

- 7.1 If a person's clothing is exposed to human biological material, the contaminated clothing should be removed immediately, soaked in 60% to 70% ethanol and appropriately laundered at the earliest opportunity.

- 7.2 If blood gets on a person's skin, the skin should be washed well with soap and water and an alcohol-based hand rub applied.
- 7.3 Any cuts or abrasions should be treated immediately by washing with soap and water and application of an appropriate band aid or bandage.
- 7.4 If eyes come in contact with human biological material, they are to be rinsed gently with eyes open. Eye wash stations are to be made available within close proximity of wet laboratories that use biological material and chemicals.
- 7.5 If the mouth comes in contact with human biological material the person must spit out the contents of their mouth and, without swallowing, rinse out with water several times.
- 7.6 In the event that a person sustains a needlestick or sharps injury:
 - 7.6.1 the affected area must be washed thoroughly with soap and water;
 - 7.6.2 appropriate first aid should be administered for any bleeding or embedded object, with assistance from a first aid officer as required;
 - 7.6.3 the source individual or source of the sharp should be identified if possible and the risk assessed;
 - 7.6.4 the person who has sustained the sharps injury should, if there is any risk of contamination, immediately attend a General Practitioner for assessment, advice, treatment and, if necessary, counselling; and
 - 7.6.5 if a source individual is identified they should be strongly encouraged to undergo blood testing.
- 7.7 All incidents of exposure must be reported immediately to the appropriate supervisor who is responsible for following University incident reporting procedures set out in the Work Safety and Health Policy and any other relevant University policies. In relation to staff members this person is the Laboratory Manager, or (when it is the Laboratory Manager who is affected) the Dean. In relation to Students this person is the staff member teaching the student and the Laboratory Manager.
- 7.8 Staff members who experience an incident outside of business hours should seek medical advice and report the incident as soon as possible to the Dean.

8 Surface cleaning of human biological material

- 8.1 In the event of a spillage of blood or other human biological material, staff members and students should avoid coming into contact with the human biological material and, in particular, avoid the human biological material coming into contact with any cuts or abrasions, and deal with the spill as soon as possible, as described below.
- 8.2 The staff member or student should ensure that no other staff member or student is at risk of coming into contact with the spillage.

- 8.3 Protective clothing and gloves should be worn when cleaning up a spill as appropriate for the extent of the spill and risk of skin/eyes coming in contact with the spilt material.
- 8.4 The contaminated area should be cleaned with warm water and detergent, left to dry and then disinfected with 70% ethanol, or an application of bleach diluted to manufacturer's instructions (or 2% sodium hypochlorite solution as an alternative) and left for 10 minutes.
- 8.5 Any paper, gloves and other waste should be disposed of in sealed plastic biohazard bags and placed in the appropriate bins. Any scalpels, broken glass or other sharp waste must be disposed of in bins specifically provided for that purpose.
- 8.6 Any equipment or materials not disposed of, and all work surfaces or clothing used, should be thoroughly disinfected immediately after use as described.
- 8.7 Hand hygiene procedures should be implemented as described in clause 4.6.