



SAFE STORAGE, HANDLING AND USE OF BLOOD GUIDELINES

PURPOSE

These guidelines support the *Health and Safety Policy* and *Health and Safety Management Standards* and provide guidance for the safe storage, handling and use of blood.

DEFINITIONS

1. Scope and Principles

- 1.1 The term 'blood' is used to encompass:
 - all blood, blood products and derivatives, bodily fluids and excretions,
 - sourced from either human or animal donors,
 - donated or purchased.
- 1.2 These Guidelines recognise that blood can be a hazard. Blood from humans can infect people with diseases that the donors carried. Samples from animals can infect people with zoonotic diseases that those animals carried.
- 1.3 These Guidelines apply to any person at Curtin University who is in any way associated with the storage, handling, use or disposal of blood. Those people will act to minimise the potential for harm arising out of working with blood.
- 1.4 These Guidelines describe a management system that is consistent with industry Best Practices.
- 1.5 These Guidelines allow for flexibility in the methods used to handle blood, as approved by the Curtin University Institutional Biosafety Committee (IBC).
- 1.6 These Guidelines follow the principles of assessing the risk of the blood, and mitigating that risk following the Hierarchy of Controls, by promoting the substitution of safer forms of blood where possible.
- 1.7 These Guidelines recognise that some uses of blood require prior approval from Curtin's Human Research Ethics Committee or Animal Ethics Committee. Any conditions placed on an approval from these Committees override the guidance outlined below. Enter details here.

2. METHODS FOR USING BLOOD

The methods for using blood vary depending on what kind of blood is being used.

2.1 Preparation before use

- 2.1.1 Complete and submit either a Hazard Identification Tool (HIT) for Hazardous Materials for Staff, or a Hazard Identification Tool (HIT) for Hazardous Materials for HDR Students, which can be found here <http://research.curtin.edu.au/research-integrity-ethics/hazard-identification-tool/> .
- 2.1.2 Read and follow the advice from the HIT Feedback.
- 2.1.3 Get vaccinated against Hepatitis B and consider also getting any other applicable vaccines.
- 2.1.4 When completing a risk assessment, consider substituting safer forms of blood where possible (see 2.3).



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- 2.1.5 Make a determination about which Risk Group (see 2.3, 2.4 or 2.5) the blood falls into, and handle the blood at the corresponding Physical Containment (PC) level.

2.2 Handling blood in the clinical setting

- 2.2.1 Follow the National Code of Practice for the Control of Work-related Exposure to Hepatitis and HIV (Blood-borne) Viruses [NOHSC:2010(2003)]http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/263/NationalCodeOfPractice_Control_WorkRelatedExposure_Hepatitis_HIVViruses_NOHSC2010-2003_PDF.pdf.
- 2.2.2 If you are working off a Curtin campus (e.g. practicum placement) then your Fieldwork Risk Assessment must acknowledge that the blood handling procedures of that workplace meet the standard required in 2.2.1.

2.3 Risk Group 1 - Use of pre-screened ex-Red Cross Blood Service products. Use of autoclaved, irradiated or 'fixed' blood.

- 2.3.3 Wear fully enclosed shoes that cover all parts of the foot up to the ankle, a labcoat that covers your clothing, and safety glasses. Have all hair tied back securely such that it does not touch your face below the eyebrows and does not move from its ties when the head is shaken. Wear gloves as required by risk assessment.
- 2.3.4 After handling the blood, decontaminate all surfaces, equipment, and hands using a chemical disinfectant as described in Appendix F of the A/NZS2243.3:2010. Remove lab coat and launder. Remove gloves and dispose of by autoclaving or incineration.

2.4 Risk Group 2 – Use of blood from donors who disease status is unknown. Use of blood from donors suspected/known to be infected with a RG2 pathogen.

- 2.4.1 Wear fully enclosed shoes that cover all parts of the foot up to the ankle, a labcoat that covers your clothing, gloves, and safety glasses. Have all hair tied back securely such that it does not touch your face below the eyebrows and does not move from its ties when the head is shaken. Wear any other Personal Protective Equipment as required by risk assessment (e.g. plastic aprons or coveralls, hair covers, shoe covers, full face shields)
- 2.4.2 Handle the blood inside a Class II Biosafety Cabinet (BSCII). Centrifuge blood using aerosol-tight sealed buckets or rotors. Unload the buckets in the BSCII.
- 2.4.3 After handling the blood, decontaminate all surfaces, equipment, and hands using a chemical disinfectant as described in Appendix F of the A/NZS2243.3:2010. Remove lab coat and autoclave before laundering. Remove gloves and dispose of by autoclaving or incineration.
- 2.4.4 If you can't handle the blood at the PC2 level, contact Curtin's Biosafety Advisor, who will help you to seek approval for your project from the IBC.

2.5 Risk Group 3/4 – Use of blood from donors suspected/known to be infected with a RG3/4 pathogen.

- 2.5.1 Contact Curtin's Biosafety Advisor, who will help you to seek approval for your project from the IBC.

2.6 Storage of blood.

- 2.6.1 Blood must be stored in a container that will not shatter, spill or leak if dropped.

2.7 Transporting blood on foot, by car, by post or by plane.

- 2.7.1 If you need to transport blood, you will need to transport it following the A/NZS2243.3:2010, the Australian Code for the Transport of Dangerous Goods by Road and Rail 7th Edition (ADG7), and the International Air Transportation Association (IATA) Dangerous Goods Regulations (DGR) Category 6.
- 2.7.2 Before you physically carry samples from one lab to another, you must double contain them (e.g. in a tube inside a lidded plastic lunchbox) and label them with a biohazard symbol, a brief description of the contents, and the contact information of someone who isn't carrying the box



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- (you can use the Biosafety Advisor if you want). Your package must survive being dropped - test an empty version of your transport system by dropping it.
- 2.7.3 To transport the samples by car, you need to make sure that the double-container (3.6.2) would survive a car crash. You can test an empty version of your transport system by (safely) throwing it hard against a wall.
- 2.7.4 To transport samples by post or by aeroplane you need to add enough absorbent material around your inner container (3.6.2) to soak up a spill of the whole contents, and add the legally required labelling to the outer package. There is a picture on pg 137 of the A/NZS2243.3:2010, and your courier company or Australia Post will be able to help you to do this. If your samples are dangerous or valuable, use World Courier. Before you post any samples, make sure that the person you are sending them to has agreed to have you send them and has fulfilled any requirements for import permits that they need to fulfil.

2.8 Quarantined blood

- 2.8.1 If your blood samples have been imported from overseas or the Eastern States of Australia, then you will also need to follow the requirements of your Import Permit or AGWA Approval.

2.9 Disposal of blood

- 2.9.1 Blood and materials contaminated with blood will be disposed of by autoclaving, incineration, or deep burial. Domestic waste disposal systems are not suitable for disposing of blood.

2.10 After accidental exposure to blood

- 2.10.1 The different Risk Groups of blood, and the different methods of exposure to the blood, result in a spectrum of risk from exposure to blood. For example, spilling autoclaved blood on your arm poses very little risk, whereas accidentally injecting yourself with blood from a source suspected to contain a RG2 pathogen poses very high risk.
- 2.10.2 Follow the Sharps Injury & Blood Exposure Guidelines
https://healthandsafety.curtin.edu.au/local/docs/Sharps_Injuries_Guideline.pdf
- 2.10.3 If possible, take a sample of the blood with you to the GP, so it can be tested for disease.

2.11 Requests to deviate from the Guidelines

All deviations from the methods above need to be approved by the Institutional Biosafety Committee via the Biosafety Advisor.

3. RELEVANT DOCUMENTS/LINKS

- [Health and Safety Policy](#)
- [Health and Safety Management Standards](#)
- Curtin Hazard Identification Tools for Hazardous Materials
<http://research.curtin.edu.au/research-integrity-ethics/hazard-identification-tool/> .
- The Australian/New Zealand Standard 2243.3:2010 Safety in laboratories - Part 3: Microbiological safety and containment. This Standard can be accessed by searching the library databases <http://databases.library.curtin.edu.au/> for 'Standards Australia online premium', and then searching the SAI Global database for '2243.3'.
- National Code of Practice for the Control of Work-related Exposure to Hepatitis and HIV (Blood-borne) Viruses
[NOHSC:2010(2003)]http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/263/NationalCodeOfPractice_Control_WorkRelatedExposure_Hepatitis_HIVViruses_NOHSC2010-2003_PDF.pdf .
- The Australian Immunisation Handbook 10th Edition 2015
<http://www.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10-home>
- Zoonosis awareness <http://www.dpi.nsw.gov.au/biosecurity/animal/humans/zoonoses-transmission>.



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Approval Authority	Institutional Biosafety Committee

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