

Monash University Procedure

Procedure Title	Ionising Radiation Source Purchase and Licensing Procedure
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Scope	This procedure applies to staff, students, visitors and contractors of Monash University.
Purpose	This procedure sets out the licensing obligations for work with ionising radiation sources.

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1. Abbreviations

GBq	giga Becquerel
kVp	peak kilovoltage
mA	Milliampere
OH&S	Monash Occupational Health & Safety
RPO	Radiation Protection Officer
RSO	Radiation Safety Officer

2. Definitions

A comprehensive list of definitions is provided in the [Definitions Tool](#). Definitions specific to this procedure/guideline are as follows.

Ionising Radiation: Ionising radiation is defined as electromagnetic or particulate radiation capable of producing ions directly or indirectly but does not include electromagnetic radiation of a wavelength of greater than 100 nanometres.

Ionising Radiation Source: For the purposes of this document an ionising radiation source is defined as radioactive material, an irradiating apparatus, a sealed source or a sealed source apparatus.

Irradiating Apparatus: For the purposes of this document, irradiating apparatus is defined as an apparatus that produces ionising radiation when energised but does not include a sealed source apparatus. An x-ray machine is an example of an irradiating apparatus.

Radiation Protection Officer: The Radiation Protection Officer is the OH&S staff member responsible for providing and coordinating radiation protection services at Monash University.

Radiation Safety Officer: A radiation safety officer is a designated staff member in an academic/administrative unit responsible for overseeing management of radiation hazards in the unit.

Radiation Source: A radiation source is any irradiating apparatus, sealed source, sealed source apparatus, or radioactive material.

Sealed Source: A sealed source is a radioactive material that is permanently sealed by the manufacturer either in a capsule or closely bound and in solid form.

Sealed Source Apparatus: Sealed source apparatus are apparatus that produce ionising radiation because they contain a sealed source. A liquid scintillation counter with an internal sealed source is an example of a sealed source apparatus.

Unsealed Source: For the purposes of this document, an unsealed source is a radioactive substance that is not a sealed source.

3. Purchase and Licensing of Ionising Radiation Sources

3.1. Irradiating apparatus, sealed sources and sealed source apparatus

The RSO must:

- Ensure that every irradiating apparatus, sealed source and sealed source apparatus within the academic/administrative unit is licensed and complies with statutory requirements and imposed licence conditions.

- Notify the RPO before any purchases of any irradiating apparatus, sealed source or sealed source apparatus within the academic/administrative unit. Sufficient time must be allowed for a licence to be obtained, if this is necessary, before the unit takes possession of the source.
- Ensure that, if not provided by the importing agent, an ARPANSA import permit is in place for any importation of sealed sources, sealed source apparatus, or unsealed material.
- Inform the RPO of the date of taking possession of any irradiating apparatus, sealed source or sealed source apparatus, and provide the RPO with:
 - The information for the University register as detailed in Section 4; and
 - For sealed sources and sealed source apparatus, a copy of the source certificate.
- Ensure that no irradiating apparatus, sealed source or sealed source apparatus is relocated, disposed of, or ownership transferred to another academic/administrative unit or outside organisation, without the prior approval of the RPO.
- Update the radiation source list in the local Radiation Management Plan when any irradiating apparatus, sealed source or sealed source apparatus is acquired or disposed of, or its ownership is transferred.
- Ensure that any user of an irradiating apparatus, sealed source or sealed source apparatus holds the appropriate use licence as required by the state regulator.¹
- Investigate issues of non-compliance in consultation with the RPO.

The RPO must:

- Ensure that, if necessary, an appropriate variation to the University's radiation management licence is obtained to allow possession of any proposed new source.
- Inform the regulator of any relocation, acquisition or disposal of irradiating apparatus, sealed source or sealed source apparatus.
- Act as the first point of contact with the state regulatory body on issues of compliance with licences and investigate issues of non-compliance in consultation with the RSO.

3.2. Unsealed sources

The RSO must:

- Ensure that any unsealed source purchased or held within the academic/administrative unit is present on the list of radionuclides covered by the University's radiation management licence.
- Coordinate with the RPO to ensure that any radionuclide to be used which is not listed on the University's radiation management licence is added to the licence before purchase.
- Investigate issues of non-compliance in consultation with the RPO.

The RPO must:

- Ensure that, if necessary, an appropriate variation to the University's radiation management licence is obtained to allow possession of any proposed new unsealed source.
- Act as the first point of contact with the state regulatory body on issues of compliance with licences and investigate issues of non-compliance in consultation with the RSO.

¹ For a list of exemptions from the requirement to hold a use licence, refer to the following website for details:
<http://docs.health.vic.gov.au/docs/doc/Exemptions-from-use-licence-requirements>

4. Register

4.1. The RSO must maintain a register of ionising radiation sources for their respective academic/administrative unit, which includes the following details:

4.1.1. Irradiating apparatus

- Department of Health Reference number
- Manufacturer
- Supplier
- Model
- Serial No
- Maximum energy – kVp & mA
- Location (room, bldg and campus)

4.1.2. Sealed sources and sealed source apparatus

- Department of Health Reference number
- Manufacturer
- Model
- Serial Number
- Isotope
- Activity
- Date of Activity
- Location (room, bldg and campus)

4.1.3. Unsealed sources

- Isotope
- Chemical form
- Maximum activity
- Location (room, bldg and campus) of storage and usage areas

4.2. The RPO will maintain a consolidated list of information on behalf of the University based on information provided by the academic/administrative unit.

5. Responsibility for Implementation

A comprehensive list of OHS responsibilities is provided in the document [OHS Roles, Committees and Responsibilities Procedure](#). A summary of responsibilities with respect to this procedure is provided below.

Head of Academic/Administrative Unit: The Head of academic/administrative unit is responsible for:

- Ensuring that a local purchasing procedure is in place, which ensures that OH&S is notified before any purchase of ionising radiation sealed sources, sealed source apparatus or irradiating apparatus, to allow the RPO to initiate the process of acquiring the appropriate Department of Health licencing;

- Ensuring that a local purchasing procedure is in place, which ensures that, where necessary, an import permit is obtained prior to any purchase of sealed sources, sealed source apparatus, or unsealed sources from outside Australia;
- Ensuring that no sealed source, sealed source apparatus or irradiating apparatus is delivered to the University before the appropriate licencing is obtained;
- Compliance with any practice specific conditions imposed under the licencing; and
- Ensuring that before purchasing any ionising radiation source, a plan has been developed for its future disposal.

Radiation Safety Officer: The Radiation Safety Officer is responsible for:

- Ensuring that licencing of existing sealed sources of ionising radiation and irradiating apparatus is kept up to date and complies with statutory requirements; and
- Maintaining a register of all ionising radiation sources held within the academic/administrative unit, and their locations, as outlined in this procedure.

Radiation Protection Officer: The Radiation Protection Officer must:

- Maintain all records as necessary to ensure compliance with statutory requirements.
- Manage on behalf of the University all necessary applications and notifications to the Department of Health to permit acquisition of new radiation sources, transfer of ownership of sources, or disposal of sources.
- Provide guidance to academic/administrative units concerning licencing and permit application procedures.
- Oversee all compliance of the University's ionising radiation sealed source and irradiating apparatus licencing requirements.
- Maintain records for all site wide licences of ionising radiation sources and practices.

6. Records

For OHS Records document retention please refer to:

[Monash University OHS Records Management Procedure](#)

Status	Revised
Approval Body	Monash University OHS Committee
Legislation Mandating Compliance	Legislation Radiation Act (2005) Radiation Regulations (2017) Occupational Health and Safety Act (2004)
Related Policies	OHS Policy
Related Documents	Australian Standards AS 2243.4:1998 Safety in Laboratories: Ionizing radiation Codes of Practice and related documents Code of Practice for the Exposure of Humans to Ionizing Radiation for Research Purposes (2005) Code of Practice for Radiation Protection in the Medical Applications of Ionizing radiation (2008) Code of Practice for Safe Use of Fixed Radiation Gauges (2007) Code of Practice for the Security of Radioactive Sources (2007) Code of Practice and Safety Guide for Portable Density/Moisture Gauges Containing Radioactive Sources (2004) Code of Practice and Safety Guide for Radiation Protection in Dentistry (2005) Code of Practice and Safety Guide for Radiation Protection in Veterinary Medicine (2009) NHMRC Code of Practice for protection against ionising radiation emitted from X-ray analysis equipment (1984) NHMRC Code of Practice for the safe use of industrial radiography equipment (1989) Monash University OHS documents Disposal of radioactive waste procedure Ionising radiation dosimetry procedures OHS Roles, Responsibilities and Committees procedure Protecting Unborn and Breast-Fed Children from the Effects of Maternal Exposure to Chemicals, Biologicals, Animals and Radiation Procedure Using Ionising Radiation Procedure

7. Document History

Version	Date of Issue	Changes made to document
3	May 2012	Ionising radiation: Purchase and Licencing Procedures, v3
4	May 2015	<ol style="list-style-type: none"> 1. Updated titles of referenced Monash documents 2. Clarification the responsibility of the Head of unit to ensure that the OH&S is informed of source purchases, in order to ensure that the appropriate licencing is in place at all times 3. Addition of specific responsibility of Head to ensure that no sources without the appropriate licencing in place are received by the unit 4. Addition of responsibility of RSO to notify OH&S of proposed source relocations 5. Addition of responsibility of RSO to update the radiation source list in the local Radiation management plan 6. Addition of responsibility of RPO to manage radiation licence applications and notifications on behalf of the University 7. Update of Codes of Practice relevant to the University
4.1	July 2015	<ol style="list-style-type: none"> 1. Updated hyperlinks throughout document to new OH&S website.
4.2	August 2017	<ol style="list-style-type: none"> 1. Updated logos in header 2. Updated Radiation Regulations to 2017
5	June 2018	<ol style="list-style-type: none"> 1. New definition for "Radiation Source" 2. Consolidated Irradiating apparatus, sealed sources and sealed source apparatus requirements into one section 3. Added requirement to provide Source Certificates to the RPO 4. Added the requirement to ensure import permit is in place when importing radiation source from overseas 5. Updated related document section