

## Policy

Radioactive nucleides are required to be under the control of a Radiation Management Plan in accordance with the Environment, Health and Safety Manual Section 5.5 - Radiation Management.

Responsibilities for the management of activities involving radioactive substances have been devolved:

1. University's Radiation Safety Adviser (RSA)
2. Faculty EHS Officer to act as the Faculty Radiation Safety Officer (FRSO)
3. Departmental Radiation Safety Officer (as nominated by the Head of Department) (DRSO)

The FRSO and DRSO shall receive training as appropriate through the Risk Management Office (RMO) or through the ANSTO approved training.

The Faculty Radiation Safety Management Plan is as follows:

### 1. Licensing of Radioactive Materials:

Licensing requirements are under the control of the RSA and DRSO.

Licences are held for Parkville Campus as a site so departments are not required to hold their own. Departments on non University owned sites shall obtain their own site license where required.

Changes to licenses are required to be approved by the RSA for the following:

- Purchase of new radioactive isotopes
- Removal of existing radioactive isotopes in use

### 2. Purchasing of Radioactive Materials:

All purchases of radioactive isotopes must be approved by the DRSO and Laboratory Manager.

A pre-purchase checklist shall be completed for all new purchases in accordance with faculty policy.

New purchases must consider:

- Who shall be using the material and do they have appropriate training
- What type of radiation monitoring is needed, ie badges and counters
- How will the material be disposed of

A risk assessment shall be conducted for all radioactive materials.

### 3. Storage of Radioactive Materials:

Signage at the entry to the facility where radioactive substances is used will be in the form of the appropriate hazard label. Signage of equipment which is used for radiation activities is also required.

Shielding of sources either sealed or unsealed will be assessed by the laboratory personnel to be adequate to ensure that emissions are not above legislative limits.

### 4. Handling of Radioactive Materials:

All staff using radioactive substances are required to be trained through the Staff Development and Training course 'Radiation Safety' on a 3 yearly basis.

Regular monitoring of personal exposure by the use of radiation badges will be undertaken for all staff who use radiation, or who are exposed to radiation in the occupational environment. Regular monitoring of the workplace through the use of spot monitoring, decontamination tests and wipe tests will be conducted by a responsible laboratory member.

Personal protective equipment will also be worn by all staff undertaking operations within the facility which involve the use of Radioactive sources.

### 5. Disposal of Radioactive Materials:

Radioactive isotopes shall be packed for disposal in the following manner:

- wet bags for gloves, benchcoat, tissues, wipes etc.
- white containers with green lids for vials, tubes, containers etc
- sharps containers for needles and syringes (Sharps containers shall be appropriately labelled)

A collection point as designated by the Department shall be used for collection of waste prior to pick up. The DRSO is responsible for screening waste to ensure that contamination levels are below exposure limits. Waste shall be picked up by an approved University contractor under the control of the RMO.

### 6. Emergency Procedures:

All laboratories must assess their activities and implement adequate emergency procedures in the event of spillage or contamination. Emergency procedures shall be documented and placed in the facility for ease of access. Emergency contact numbers should also be provided on all equipment which is used to store or handle radioactive isotopes.

### 7. Safe Work Procedures:

All laboratories must assess their activities and implement documented safe work procedures. Procedures shall include the following safe handling requirements:

1. Personal protective equipment shall be worn at all times:
  - a. Gown
  - b. Gloves
  - c. Eye protection (where a splash potential exists)
  - d. Closed footwear
2. A monitoring badge shall be worn where appropriate to monitor exposure levels
3. A regular wipe test of benches, equipment and storage areas shall be conducted
4. Areas where radioactive materials are used shall be signed with radioactive tape
5. Spill trays shall be used for handling liquid radioactive materials
6. Benches and equipment shall be decontaminated on a regular basis
7. Sources shall be shielded to reduce emissions
8. Geiger counters shall be used to monitor exposure levels during activities
9. A log book should be maintained (prac book is acceptable) documenting radiation activities
10. Staff and students shall receive training in Radiation Management through the RMO
11. Staff and students shall receive training in safe work procedures by the Laboratory Manager
12. Staff and students shall be trained in emergency and clean up procedures
13. Health monitoring may be required for the use of some isotopes

## Inspection Checklist

Inspections should be completed on areas where radioactive isotopes are used on a regular basis. This is a sample checklist and should be modified to fit with individual area needs.

Checklists should be completed:

- ◆ 3 monthly for the first year.
- ◆ 6 monthly thereafter (if no significant issues are identified).

### Area Inspection

The area is clean and tidy	Y / N / NA
The area has appropriate signs and labels	Y / N / NA
Adequate safety shielding is in place	Y / N / NA
Radioactive waste bins are provided and labelled	Y / N / NA
Authorised personnel only are using radioactive materials	Y / N / NA
Safe Work Procedures are documented and available	Y / N / NA
Staff and students have been trained in safe work procedures	
Records of storage and use of isotopes are maintained	Y / N / NA
Procedures for emergencies for radioactive incidents are displayed	Y / N / NA
Procedures for handling waste are documented	Y / N / NA
Personal monitoring badges are provided where applicable to all users	Y / N / NA
Activity meters have been checked	Y / N / NA

### Count Inspection

Count on the bench where activities take place	
Count on the floor in front of the bench	
Count on the wall behind the bench	
Count on the front of the shielding	
Count on the tap and sink area used for radioactive work	

### Work Required

<i>Details of corrective actions</i>	<i>Date Completed</i>

### Authorisation:

Name \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

***Date of Next Inspection*** \_\_\_\_\_