



# **RADIATION SAFETY ACT**

## **Personal Radiation Monitoring**

The Radiological Council last revised the prescribed monitoring requirements for persons occupationally exposed to ionising radiation in Western Australia at its 175<sup>th</sup> Meeting on 14 August 2008. The tables on the following pages summarise these requirements.

The wearing period given for each category of radiation practice is the maximum permissible unless formal exemption has been given by the Council. In certain circumstances, Council may approve the use of direct-reading personal electronic dosimeters worn for a sessional period in lieu of the usual film, TLD or OSL badge dosimeters.

If you wish to clarify your need to be monitored, please contact the Radiological Council. For group enquiries, please contact the Council through your organisation's Radiation Safety Officer.

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Revision	1.6	Date	04 June 2024
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## Approved Personal Radiation Monitoring Service Providers

The following services are presently recognised by the Radiological Council of Western Australia for the purpose of registrants satisfying regulation 25A(1) of the Radiation Safety (General) Regulations:

### **Australian Radiation Protection and Nuclear Safety Agency**

619 Lower Plenty Road  
YALLAMBIE VIC 3085  
Telephone: (03) 9433 2211  
Facsimile: (03) 9432 1835  
Email: [prms@arpansa.gov.au](mailto:prms@arpansa.gov.au)  
[www.arpansa.gov.au](http://www.arpansa.gov.au)

### **SGS Radiation Services**

10/585 Blackburn Road  
NOTTING HILL VIC 3168  
Telephone: (03) 9574 3200  
Email: [au.radiation.prms@sgs.com](mailto:au.radiation.prms@sgs.com)  
[www.sgs.com/en-au](http://www.sgs.com/en-au)

### **Global Dosimetry Solutions**

2652 McGraw Avenue  
IRVINE CA 92614  
USA  
Telephone: (949) 419 1000  
Facsimile: (949) 296 1144  
[www.dosimetry.com](http://www.dosimetry.com)

### **Global Medical Solutions Australia**

PO Box 115  
ARNCLIFFE NSW 2205  
Telephone: (02) 9503 8100  
Facsimile: (02) 9567 5374  
[www.gms-aus.com](http://www.gms-aus.com)

### **Landauer Australasia**

Locked Bag 2001  
DRUMMOYNE NSW 1470  
Telephone: (02) 9713 0000  
Facsimile: (02) 9712 4730  
Email: [equiry@landauer.com.au](mailto:equiry@landauer.com.au)  
[www.landauer.com.au](http://www.landauer.com.au)

## Radiation Safety (General) Regulations

### Summary of Monitoring Requirements for Radiation Users

Categories of Radiation Practice	Use of personal dosimeters*	Wearing period
<b>Diagnostic X-ray</b>		
General medical	One personal dosimeter	three months
Image guided interventional procedures	One (or two**) personal dosimeter	one month
Bone densitometry – fan beam	One personal dosimeter	three months
Bone densitometry – pencil beam	Exempt provided user is normally 2 m from patient	
Chiropractic	One personal dosimeter	three months
Veterinary	One personal dosimeter	three months
Dental	Exempt when practice complies with the NHMRC <i>Code of practice for radiation protection in dentistry (1987)</i> ***	
<b>Therapeutic X-ray &amp; Therapeutic Electrons</b>		
External beam radiotherapy (EBRT)	One personal dosimeter	three months
Intra-operative radiotherapy (IORT)	One personal dosimeter	one month
Veterinary radiotherapy – external beam radiotherapy	One personal dosimeter	three months
<b>Industrial and research X-ray</b>		
X-ray analysis – fully enclosed	Exempt when practice complies with the NHMRC <i>Code of practice for protection against ionizing radiation emitted from x-ray analysis equipment (1984)</i> ***	
X-ray analysis – partly enclosed	One personal dosimeter	three months
Cabinet or special application x-ray equipment	Exempt when practice complies with the NHMRC 1987 <i>Statements</i> applying to cabinet x-ray equipment and enclosed x-ray equipment for special applications***	
Industrial radiography	One personal dosimeter	one month
General x-ray	One personal dosimeter	three months
<b>Educational</b>		
Tertiary	Same radiation monitoring requirement as radiation practice category	
Secondary	Exempt when practice complies with the NHMRC <i>Code of practice for the safe use of ionizing radiation in secondary schools (1986)</i> ***	

Categories of Radiation Practice	Use of personal dosimeters*	Wearing period
<b>Mining and Milling</b>		
Uranium mill workers	One personal dosimeter	three months
Mineral sands plant operators	One personal dosimeter	three months
Miners and other mine workers	Exempt if non-designated radiation worker	
<b>Diagnostic and therapeutic radioactive substances</b>		
Brachytherapy – manual	One personal dosimeter	one month
Brachytherapy – remotely controlled	One personal dosimeter****	three months
Nuclear medicine – diagnostic	One personal dosimeter	one month
Nuclear medicine – therapeutic	One personal dosimeter	one month
Veterinary nuclear medicine	One personal dosimeter	one month
Radiopharmaceutical production	One personal dosimeter****	one month
Pathology, medical research and clinical laboratory	One personal dosimeter, unless exempted by regulation 25(7)	three months
<b>Cyclotron</b>		
Cyclotron use or servicing	One personal dosimeter****	one month
<b>Industrial and research radioactive substances</b>		
Static elimination	Exempt	
Analytical	Exempt	
Radiation gauges	Exempt when devices are fixed to a structure, and comply with the NHMRC <i>Code of practice for the safe use of radiation gauges (1982)</i> ***	
Industrial radiography	One personal dosimeter	one month
Borehole logging	One personal dosimeter	three months
Soil moisture and/or density	One personal dosimeter	three months
Calibration/testing	One personal dosimeter	three months
Sealed and unsealed – laboratory or field	One personal dosimeter, unless exempted by regulation 25(7)	three months
Gamma Irradiator (IAEA Category I or II Irradiator)	Exempt	

Categories of Radiation Practice	Use of personal dosimeters*	Wearing period
<b>Installation, maintenance, repair, and quality assurance of radiation devices and sources</b>	Same radiation monitoring requirement as radiation practice category, unless special requirements have been applied. Note however that where an exemption from personal radiation monitoring exists for <i>use</i> , persons <i>installing, maintaining or repairing</i> radiation devices and sources would not normally be exempt.	
<b>Radiation Safety Officers</b>	Same radiation monitoring requirement as radiation practice category, if actively involved.	

- \* The dosimeter is to be worn at waist level and beneath any protective clothing, unless the circumstances of exposure are such that the dosimeter should be worn elsewhere on the body, and any change of wearing position is approved by the organisation's Radiation Safety Officer. Where the maximum representative dose to the body is uncertain or the radiation field exposure is not relatively uniform or special conditions pertain to the use of radiation sources, the user should consult with their Radiation Safety Officer and/or the Radiological Council and their radiation monitoring service provider to confirm that a satisfactory radiation monitoring outcome will be achieved.
- \*\* Clinical staff who are required to be in close proximity to the patient during interventional x-ray procedures must wear a 0.25 mm (minimum) lead equivalent apron and be monitored with 2 personal monitoring dosimeters. One dosimeter is worn under the apron at waist height and the second dosimeter is worn outside the apron usually on the collar. Both dosimeters are used to estimate the effective dose.
- \*\*\* Exemption from the requirement to use personal dosimeters is based on practices that comply with the relevant Code of Practice where it is clear that the doses received by persons exposed in such workplaces are below the public dose limit. However, where special conditions pertain to the use of radiation sources, or where there are changes in workload, the practice conditions, or the level of staff training, etc., then the use of personal dosimeters may be warranted to confirm that a satisfactory level of radiation protection is achieved in the workplace.
- \*\*\*\* Additional requirements of immediate availability of personal electronic dosimeters for emergency use may apply.