

Personal radiation monitoring devices

Updated August 2023

EPA 609/23: This information sheet discusses the use of approved personal radiation monitoring devices for radiation workers within South Australia.

Introduction

A personal radiation monitoring device (PRMD) is a radiation sensor designed to measure, over a specified period of time, the radiation dose received by a person who is occupationally exposed to radiation.

Legislation covering their use

The use of PRMDs in South Australia is governed by legislation under the [Radiation Protection and Control Act 2021](#) (RPC Act) and the [Radiation Protection and Control Regulations 2022](#) (RPC Regulations). Both legislation are administered by the Radiation Protection Branch of the Environment Protection Authority (EPA).

Under Regulation 86, an employer must issue a PRMD to each radiation worker in their employment, unless they have been given an exemption (under section 76 of the RPC Act). Only radiation workers involved with plain dental X-ray apparatus (excluding panoramic radiography, cephalometric and cone-beam computed tomography), unless directed in writing by the EPA, and some specific persons or class of persons within particular organisations are currently exempt.

Who should use one

If you are occupationally exposed to radiation you must wear a PRMD unless you or your work place has been specifically granted an exemption. If you are only involved in taking plain dental X-rays (excluding panoramic radiography, cephalometric and cone-beam computed tomography), you are currently granted an exemption.

Even if you are exempt from wearing such a device you may wish to wear one, in which case you should discuss this with your employer. Your employer may decide to set up a personal radiation monitoring program by accessing one of the personal radiation monitoring services available from government agencies or private organisations. However, if an exemption has been granted, your employer is not legally obliged to set up such a program. Note that the EPA does not provide a personal radiation monitoring service.

The use of PRMDs is strongly recommended for students who are occupationally exposed during their course of study. This is regardless of the use of PRMDs is not required for the type of operations being carried out, or the employer has prior written confirmation from the EPA stating that the use of PRMDs is not required.

Where do I get an approved PRMD?

Several organisations provide a range of approved PRMDs suitable for various radiation types (alpha, beta, gamma, X-ray, neutron and fast neutron), as shown in the table below. These organisations also offer personal radiation monitoring services. Please note that these organisations provide products and services on a commercial basis, so there is usually a cost associated with using them.

Personal radiation monitoring device suppliers

Approved PRMD	Supplier	Radiation type
TLD Monitor	ARPANSA ¹	beta, gamma, X-ray
Special TLD Monitor	ARPANSA	beta, gamma, X-ray
Neutron Monitor	ARPANSA	beta, gamma, X-ray, neutron
Extremity Monitor	ARPANSA	beta, gamma, X-ray
PADC/BeO OSL	ARPANSA	Photon, fast neutron
BeO OSL	ARPANSA	Gamma, X-ray
RDC Type 82 TLD-XBGN dosimeter	GMS ²	beta, gamma, X-ray, neutron
RDC Type 83 TLD-XBGN/TE dosimeter	GMS	beta, gamma, X-ray, neutron
RDC Type 05 TLD-XBG ring dosimeter	GMS	beta, gamma, X-ray
Pa Badge	Landauer ³	beta, gamma, X-ray
Ja Badge	Landauer	beta, gamma, X-ray, neutron
Ta Badge	Landauer	beta, gamma, X-ray, thermal
U Badge (Ring)	Landauer	beta, gamma, X-ray
Personal Alpha Dosimeter	RSIC ⁴	radon progeny and long lived radioactive dust
Instadose® 2	SGS ⁵	beta, gamma, X-ray
Instadose™	SGS	gamma, X-ray
Instadose +™	SGS	gamma, X-ray
Genesis Ultra TLD	SGS	beta, gamma, neutron
Genesis Ultra TLD with CR39	SGS	beta, gamma, neutron
Film + Orange holder	SGS	gamma, X-ray
Film + Yellow holder	SGS	gamma, X-ray
Film + Blue holder	SGS	gamma, X-ray
TLD + Ring holder	SGS	gamma, X-ray
TLD + PB5 holder	SGS	gamma, X-ray
TLD + PB10 holder	SGS	gamma, X-ray
Mirion DMC 3000	SGS	gamma, X-ray
Mirion SOR/R	SGS	gamma, X-ray
Mirion SOR/T	SGS	gamma, X-ray

Contact information for the suppliers

Australian Radiation Protection and Nuclear Safety Agency¹
619 Lower Plenty Road
Yallambie VIC 3085
Telephone: (03) 9433 2211 or 1800 678 112
Web: www.arpansa.gov.au
Email: prms@arpansa.gov.au

Global Medical Solutions Australia Pty Ltd²
PO Box 115 Arncliffe NSW 2205
Telephone: (02) 9503 8100
Facsimile: (02) 9567 5374
Website: www.gms-aus.com
Email: prms@gms-aus.com

Landauer Australasia³
Locked Bag 7002
Parramatta NSW 2124
Telephone: (02) 8651 4000
Facsimile: (02) 8003 9611
Web: www.landauer.com.au
Email: dosimetry@landauer.com.au

Radiation Safety Institute of Canada⁴
National Laboratories
102-110 Research Drive
Saskatoon, SK S7N 3R3
Telephone: +306 975-0566
Facsimile: +306 975-0494
Internet: www.radiationsafety.ca

SGS Radiation Services⁵
10/585 Blackburn Road
Notting Hill VIC 3168
Telephone: (03) 9574 3370
Facsimile: (03) 9574 3399
Web: www.radiation.net.au
E-mail: au.radiation.prms@sgs.com

Further information

Legislation

[Online legislation](#) is freely available.

General information

Environment Protection Authority
GPO Box 2607
Adelaide SA 5001

Telephone: (08) 8463 7826

Website: <https://www.epa.sa.gov.au/>

Email: eparadiationprotectionbranch@sa.gov.au
