

TESTING

TRAINING

SURVEYS

CONSULTING

Founded in 1980, the **Radiation Safety Institute of Canada** is an independent, national organization dedicated to promoting and advancing radiation safety in the workplace, in the environment and in the community. Our commitment to the principle of “good science in plain language®” underpins everything we do.

*According to United Nations officials, the Radiation Safety Institute of Canada is the only independent organization of its kind in any UN member country.*

We offer a broad range of educational, technical and scientific services to businesses, government organizations, health care providers, communities and individuals across Canada and around the world. The Radiation Safety Institute of Canada is known among our friends and customers for the high quality and scientific integrity of our work and the practical, helpful assistance of our people. Our unbiased information service receives hundreds of calls and e-mails every year for information and assistance on workplace radiation questions.

The Radiation Safety Institute of Canada is incorporated under the laws of Canada as a not-for-profit corporation and is also a registered charity (CRA# 0737171-21-13).



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**Radiation Safety  
Institute of Canada**  
Institut de radioprotection du Canada



Good Science in Plain Language®

National Laboratories – Saskatoon, SK

# LABORATORY SERVICES

WWW.RADIATIONSAFETY.CA

leak testing  
calibration  
surveys  
monitoring  
dosimetry



## Safeguarding the health and well-being of your workers, your community and the environment is more than an obligation – it's the law

Backed by the strength of our scientific staff and our cutting-edge technology, the Radiation Safety Institute of Canada offers a full range of laboratory services to companies and organizations who work with radiation sources:

### RADIATION INSTRUMENT CALIBRATION

Companies and institutions that use radiation survey instruments or electronic dosimeters are required by law to have annual instrument calibration checks to ensure that they operate accurately.

The Radiation Safety Institute of Canada can calibrate most types of gamma survey instruments, electronic and ion chamber type dosimeters. Our Instrument Calibration Service is approved and audited by the Canadian Nuclear Safety Commission (CNSC) under its *Regulatory Standard R-117, Requirements for Gamma Radiation Survey Meter Calibration*.

### LEAK TESTING OF SEALED SOURCES

If you use sealed radiation sources

with activities greater than 50 MBq, you are required by law to test annually to verify that the sources are not leaking radioactive material.

Our Leak Testing Service covers most gamma, beta and alpha sources and is approved under CNSC *Regulatory Standard R-116, Requirements for Leak Testing Selected Sealed Radiation Sources*.

### PERSONAL ALPHA DOSIMETRY (PAD)

The Radiation Safety Institute of

Canada is the only organization in North America licensed to provide individual monitoring of workers exposed to radiation from radon, thoron progeny and long lived radioactive dust using our unique PAD system.

Licensed under CNSC *Regulatory Standard S-106, Revision 1*, the PAD Service – including laboratory analysis, technical support, on-site equipment, quality assurance, quality control and timely reporting of results – is provided by us from our National Laboratories.

### A FEW OF OUR VALUED LABORATORY SERVICES CLIENTS

- CAMECO
- AREVA INC.
- LANTHEUS MEDICAL IMAGING
- CANADIAN LIGHT SOURCE, INC.
- MOSAIC CORPORATION



## leading-edge science + the latest technology



### Our great science sets us apart. . . but our people make us exceptional

Working with radioactive sources and in environments where there is the potential for exposure to naturally occurring radiation requires a strong concern for safety. We share this concerns and have equipped our lab accordingly.

The following is an overview of our laboratory technologies:

#### IMAGE ANALYSIS SYSTEM (IAS)

Our Image Analysis System is used in our Personal Alpha Dosimetry (PAD) service to count

the number of tracks on the dosimeter head film. The IAS consists of a microscope and a CCD camera linked to a computer. The IAS system automates the film counting, ensuring a fast and accurate count.

#### LOW BACKGROUND ALPHA/BETA COUNTER

Our low background alpha/beta counter is an automated system used to count the alpha activity on the filters of the dosimeter heads to determine the exposure to Long

Lived Radioactive Dust (LLRD ).

#### ALPHA SPECTROSCOPY SYSTEM

The alpha spectroscopy system is a series of nuclear modules attached to a multichannel analyzer. The alpha spectroscopy allows us to generate a full energy spectrum of the LLRD from a PAD filter.

This is especially important in mixed radiation environments. For example, in the uranium mills it may be important to separate the

exposure from uranium ore and uranium concentrate.

To learn more about these or any of our other laboratory, technical and education services, please visit [www.radiationsafety.ca](http://www.radiationsafety.ca) or call us at 1-800-263-5803.



### TRAINING SERVICES

Our comprehensive education and training programs have been created to equip you and your employees with the skills needed to make informed decisions regarding gamma, beta and alpha radiation, electromagnetic fields (EMF) and X-rays in the workplace. Our courses have been developed over many years and are continually revised to ensure that they reflect the latest scientific advances and changes in provincial and federal regulations.



### REGULATORY DOCUMENTATION

Businesses and institutions that use licensed radioactive materials or radiation emitting machines are required by law to submit appropriate documentation on a regular basis to both federal and provincial regulators. We can help in almost any area where regulatory documentation is required and will ensure that the required documentation is supplied on time to federal and provincial regulators.



### WORKPLACE SURVEYS

Our surveys measure the extent of exposure to radiation in the workplace from electromagnetic fields (EMF), X-rays, airborne environmental radon and various other radioactive materials.