

Laboratory Services for the Uranium Mining Sector



- Environmental monitoring
- Leachability studies
- Kd (diffusion coefficient) studies
- Acid/Base accounting
- Radon emanation rate
- Radiation safety services

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Services for the Uranium Mining Sector

SRC Environmental Analytical Laboratories offers one of the most complete arrays of analytical services in Canada, with unique capabilities in radiochemical analysis.

The lab serves a large number of clients in industry, mining, consulting, and governments. Analysis of environmental samples is provided for special assessments and for routine monitoring programs. Many environmental decision makers have come to rely on our quality laboratory services and precise analyses to assess impacts and solve environmental challenges.

Environmental Monitoring Services

SRC Environmental Analytical Laboratories provides a comprehensive range of analytical testing services to assist its customers in carrying out their business and environmental programs and ensuring that regulatory obligations are being fulfilled.

These tests include:

- Radiochemical analysis for Uranium, Radium-226, Thorium isotopes, Lead-210, Polonium-210, and other natural radionuclides
- Several man-made radionuclides, including some fission products
- Trace metal analysis by ICP/emission and ICP/MS
- Nutrients and physical properties
- Analysis for trace organic contaminants including PCBs, oils, solvents and others

These tests can be conducted on a wide variety of sample types:

- Water – surface water, subsurface water, process water, effluent, lagoons, tailings ponds, and rainfall
- Soil, sediment, exploration samples, drill cores, ores, tailings, waste rock
- Biological – fish, aquatic organisms, vegetation, small rodents, and other animals
- Airborne particulates – high volume air filters, respirable dust filters, dust fall jars
- Waste oils

Leachability Testing

SRC Environmental Analytical Laboratories has performed a wide variety of leaching tests on ore, tailings, and waste rock. These include: dynamic column leaching, static and sequential leaching, and standard CGSB and EPA leach tests.

K_d (Diffusion Coefficient) Determinations

A wide variety of techniques can be used to measure the K_d for various ionic constituents distributed between aqueous and solid phases. These techniques include batch tests, shaking tests, static tests, special diffusion cells, and diffusion onto specially prepared surfaces.

Acid / Base Accounting

These measurements are performed to determine acid producing potential (AP), acid neutralizing potential (AN), and net acid generating potential (NAG) of ores and waste rock, and also their sulfur, sulfate and sulfide concentrations, and paste pH.

Radon Emanation Rate

This measurement is used to determine the rate at which radon diffuses from rock, soil, or ore into the surrounding air. It can also be used to determine radon fractional release, the ratio of radon released vs the total potential release.

Radiation Safety Services

SRC Environmental Analytical Laboratories is approved by CNSC to conduct leak test measurements for a variety of radioisotopes commonly used in sealed sources. The lab also provides contamination monitoring services by performing measurements of wipes used to monitor for removable contamination.