

# Advanced Microanalysis Centre™

## All the analytical tools for mineral exploration in one lab

The newly announced Saskatchewan Research Council (SRC) Advanced Microanalysis Centre™ will supply all the necessary analytical tools for mineral exploration—from sample preparation through to trace-element analysis—in one convenient location.

The Advanced Microanalysis Centre™ includes:

- A CAMECA SX-100 Ultra electron microprobe
- A Hitachi S3000-N variable pressure scanning electron microscope (SEM)
- A New Wave UP213 laser ablation system
- A Bruker S8 Tiger X-ray fluorescence spectrometer (XRF)
- A Rigaku Miniflex II X-ray diffractometer (XRD)
- Two Logitech®-based thin section preparation labs, including one specifically designed to handle only radioactive samples

This new laboratory facility, in conjunction with SRC Geoanalytical Laboratories, is Saskatchewan's most advanced and complete analytical centre supporting the mineral exploration community. Our Saskatoon location is convenient for exploration companies working in Canada and the rest of the world.



## CONTACT

Mining and Minerals  
Saskatchewan Research Council  
125 - 15 Innovation Blvd.  
Saskatoon, SK S7N 2X8  
T: 306-385-4066  
E: minerals@src.sk.ca

[www.src.sk.ca](http://www.src.sk.ca)

## Equipment and Services

### **Electron Microprobe**

- Five wavelength dispersive (WD) spectrometers
- Thin window energy dispersive spectrometer (EDS)
- Cathodoluminescence (CL) detector

Applications include:

- Indicator mineral analysis (kimberlite, gold, etc.)
- Thermobarometry
- X-ray mapping of elemental distributions
- Chemical age dating of U-bearing minerals

### **Scanning Electron Microscope**

- Hitachi S3000-N environmental scanning electron microscope (SEM)
- Biological and other “wet” sample imaging
- Surface imaging using secondary electrons (SEI)
- Compositional variability imaging using back-scattered electrons (BSE)

### **Laser Ablation-ICPMS**

- New Wave Research UP-213 laser ablation (LA) system
- PerkinElmer DRC II quadrupole mass spectrometer (ICPMS)
- Ni-in-garnet thermometry
- In situ Pb isotope analysis

### **X-ray Fluorescence**

- Bruker S8 Tiger X-ray fluorescence (XRF) WD spectrometer
- Whole rock analysis
- Coal and petrochemical trace-element analysis

### **X-ray Diffraction**

X-ray diffraction (XRD) equipment for:

- Mineral identification/ abundances in bulk samples
- Identification of insoluble minerals in potash
- Clay identification / quantification in oriented samples

### **Thin Sectioning**

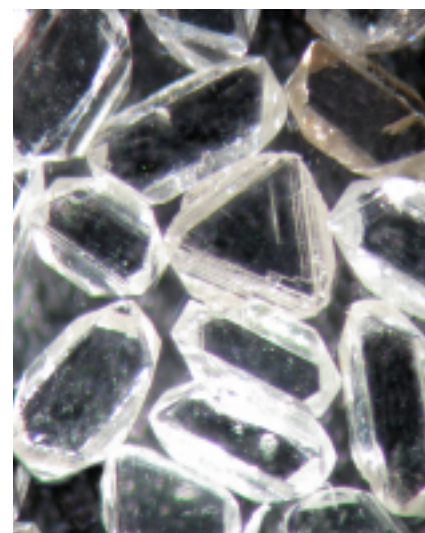
- Two Logitech®-based thin section labs
- Automatic plate flatness monitoring
- Prepares flattest possible thin sections, ideal for electron microprobe analysis

Polished blocks and thin sections prepared from:

- Kimberlite and other fragmentary rocks
- Radioactive materials
- Ore samples
- Indicator minerals
- Fluid inclusion wafers



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Saskatchewan Research Council (SRC) is the province's leading provider of applied R&D and technology commercialization. We have been providing Smart Science Solutions™ in Saskatchewan for over 60 years.