The Saskatchewan Research Council’s (SRC) Advanced Microanalysis Centre™ electron probe micro-analyzer (EPMA), also referred to as an electron microprobe, can be used to perform highly sensitive chemical analyses of micro-volumes of samples. Elements, from boron to uranium, can be analyzed from 100% abundance down to trace levels with typical detection limits less than 0.01 wt %. Providing in situ, non-destructive analysis of very small volumes (1-2 μm³) combined with the ability to create detailed images of the sample, makes the electron microprobe one of the most important tools for micro-chemical analysis.
Services, Features and Equipment

• Cameca SX-100 electron microprobe equipped with five wavelength dispersive spectrometers and fitted with a variety of large area diffraction crystals; provides the greatest possible sensitivity for quantitative analysis.

• Imaging using secondary and back-scattered electron detectors and the panchromatic cathodoluminescence (CL) detector.

• Thin window silicon drift energy dispersive X-ray detector (EDS) used for rapid identification based on qualitative chemical composition.

• Quantitative analysis for kimberlite indicator mineral chemistry and analysis of minor and trace gold in sulfide minerals.

• Identification of sample material and homogeneity by mapping element distribution.

• Determination of the concentration of rare earth elements (REE) in REE-bearing minerals.

• U-Th-Pb analysis of uraniferous minerals to provide chemical age dates and micro-scale chemical analysis for metallurgy.

• X-ray mapping capabilities for quantitative mineralogy.

EPMA at the Advanced Microanalysis Centre™ is available on a fee-for-service basis at a rate of $160* per hour.

* Price subject to change without notice.