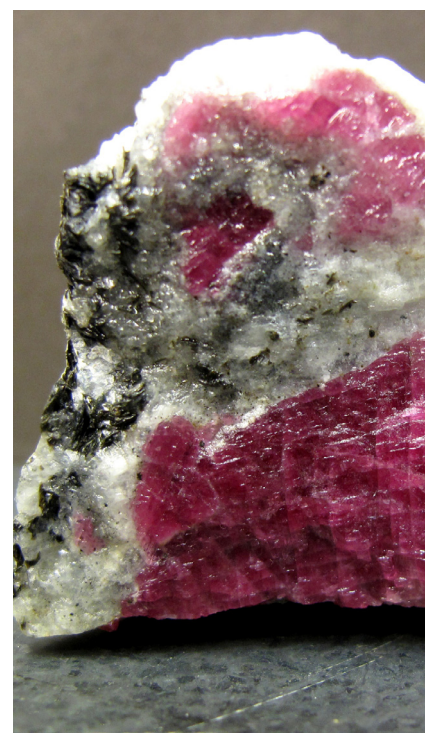


Advanced Microanalysis Centre™ X-ray Diffraction (XRD) Analysis

The X-ray diffraction (XRD) system at the Saskatchewan Research Council's (SRC) Advanced Microanalysis Centre™ is a powerful tool used to characterize crystalline materials. It permits both qualitative and quantitative analysis of minerals or other crystalline compounds present in samples. In the mining sector, it is primarily used for determining the various mineral assemblages present in different geological settings. It is a well-established system for process and quality control of minerals and ores.

Features

- Effective method for quantitative determination of clay mineralogy
- Automatic sample changer (66 samples) and high-efficiency detector for rapid analyses
- Data analysis and interpretation using whole-pattern fitting algorithms for quantitative Rietveld analysis
- References diffraction data from the latest ICDD database
- Thorough quality control using internally consistent reference data



CONTACT

Advanced Microanalysis Centre™
Saskatchewan Research Council
125 - 15 Innovation Boulevard
Saskatoon, SK, Canada, S7N 2X8
T: 306-385-4066
E: microlab@src.sk.ca

www.src.sk.ca

X-Ray Diffraction Services

10400A – Qualitative X-ray powder diffraction analysis for mineral identification - \$150/sample

- Finely-ground samples are randomly mounted (back-packed)
- Fully customizable scan parameters and X-ray intensity settings
- Data reported as diffractogram with mineral peaks identified

10400B – Quantitative X-ray powder diffraction analysis for mineral - \$200/sample

- Mineral abundances calculated using internally consistent reference data
- Data reported in table format with supporting documentation: diffraction patterns, ICDD PDF file numbers, RIR values and calculated and residual patterns
- Data quality monitored by duplicate analyses

10400C – Clay speciation and abundances - \$250/sample

- Clay fraction ($<2\ \mu\text{m}$) separated using sonic probe and isolated by centrifugation
- Clay abundances determined relative to an in-house standard
- Data reported in table format (scans and peak fitting results available on request)



Powder samples loaded into the D4 sample magazine (max. capacity is 66 samples).



Native copper with malachite alteration on the surface.
Location unknown.