

Petrographic and Mineralogical Workroom

The microscopy workroom provides the following services:

- + Qualitative and quantitative analysis of rocks and minerals using transmitted and reflected light microscopy,
- + High-resolution digital photographic documentation of prepared microscopic samples, including computer-based image analysis using NIS-Elements BR software,
- + Three-dimensional imaging of rock sample fragments with extended depth of field, using a stereomicroscope integrated with Leica Application Suite (LAS) software.

Equipment:

- + Nikon ECLIPSE LV100N POL polarising microscope with dual DIA/EPI illumination, Nikon DS-R11 digital camera, and NIS-Elements BR image analysis software,
- + Leica M205C stereomicroscope equipped with a polarisation module and motorised Z-axis column, DFC450 digital camera, and Leica Application Suite (LAS) image analysis software.



The grinding workroom provides the following services:

- + **Covered thin sections** with cover glass, standard size 48 × 28 mm,
- + **Universal (uncovered) thin sections**, polished **on one side**, standard size 48 × 28 mm,
- + **Universal (uncovered) thin sections**, polished **on both sides**, standard size 48 × 28 mm,
- + **Embedded grain mounts** prepared from processed material (for transmitted and reflected light microscopy),
- + **1-inch diameter mounts** for scanning electron microscope (SEM) analysis,
- + **Polished sections for the examination of ore minerals**,
- + **Polished sections for documentary photography**,
- + **Cutting and shaping** of rock material.

Equipment:

The workroom is equipped with a comprehensive suite of instruments for the preparation of petrographic samples, manufactured by the French company BROT LAB. The equipment set includes:

- + **An automatic grinding unit** fitted with a head for the simultaneous finishing of up to six samples,
- + **A precision cutting saw** for thin-section preparation, with freely adjustable cutting height,
- + **A lapping unit operating in an oil suspension**, designed for the preparation of samples from hydrophilic materials,
- + **A double-station grinding table** with Ø 300 mm cast-iron discs,
- + **An automatic polishing machine** capable of processing up to five samples simultaneously,
- + **A heated mounting bench with clamps** for bonding up to twelve samples simultaneously,
- + **A vacuum chamber for deep impregnation of geological materials**, equipped with a heated base plate,
- + **An arm saw** for shaping test materials, equipped with a continuous diamond blade, 1.9 mm thick, with a working radius of 10 cm.

In addition, the workroom is equipped with:

- + **A P1 precision saw**, adapted for use with diamond blades with a thickness of 0.6 mm and a working radius of 5 cm, designed for the precise shaping of high-value samples,
- + **A Minitech 233 polishing machine**, manufactured by Presi,
- + **An ID-H height gauge** with a measurement accuracy of 0.5 µm, manufactured by the Japanese company Mitutoyo,
- + **A polarising microscope** for transmitted and reflected light, manufactured by Zeiss,
- + **A NITON handheld X-ray fluorescence (XRF) analyser**.

Contact us

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