Thin section lab

Thin sections are used for identification of minerals, and for studying mineral relationships, textures and structures of the rocks.

Mineral assemblages, chemical composition and textures provide information about temperature and pressure conditions during the formation of the rock, or the rock's deformation history.

A thin section is a 30 µm thick slab of rock that is bonded on a glass slide. When rock is cut into thin slices like this, most minerals are translucent and can be identified from the refraction of transmitted light of an optical microscope.

Thin sections can also be utilized for chemical analysis of minerals using a scanning electron microscope (SEM) or microprobe.

Thin sections of unconsolidated sediments and highly fractionated or porous rocks can be made after impregnation with epoxy. If color is added to the epoxy, the porosity and pore form can be determined.

Other epoxy embedded samples can be prepared and polished in the lab.

Instrumentation:

- Lapping machine – Logitech LP 50 with space for 3 sample holders (jigs) and an automatic flatness controller.
- Struers Epovac for vacuum impregnation
- Struers Discoplan-TS saw
- Struers Minitom saw

- Knuth Rotor for grinding
- Struers Tegramin 30 with 3 sample holders for polishing. Used for both diamond and oxide polishing
- Buhler Minimet 1000 for grinding and polishing
- Polarization Microscope Leica DMLP

Polishing room.
Most thin sections are polished.

Polishing machine.

Polarization microscope with a digital camera connected to a PC work-station.

Contact person for lab:

- Trine Dahl