

# Geoscientific preparation from hard rocks

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The geosciences use different analytical methods. Probably the most basic method is the classical analysis on a **thin section** with a petrographic microscope. In all analytical methods, a thin section or preparation is required. Depending on the application, a wide range of thin sections are made: normal and polished thin sections as well as double-sided polished thin sections, thick sections, grain mounts or standards.

The hand pieces are **formatted** with different rock saws to the size of the later microscope slide. Then the blocks get **ground** with a ring system or by hand. The samples are **glued** to a slide with epoxy resin inside a pressure bracket for the total curing time. This method ensures a uniform adhesive layer between the sample and the slide which is important for the further processing. After that the samples are **sawn off** to about 200 $\mu$ .

Afterwards, the thin sections are **ground** to the given final thickness using the jigs from the lapping system. The final thickness varies between 25 $\mu$  and 30 $\mu$ , depending on the analytic methods, for thick sections between 100 $\mu$  and 150 $\mu$ . Optionally, the thin sections can be **covered** with cover glasses for protection.



Sample from the field



Saw Exotom 150



clamped sample



Saw Woco 50



LP 50 Lapping System



Ring system



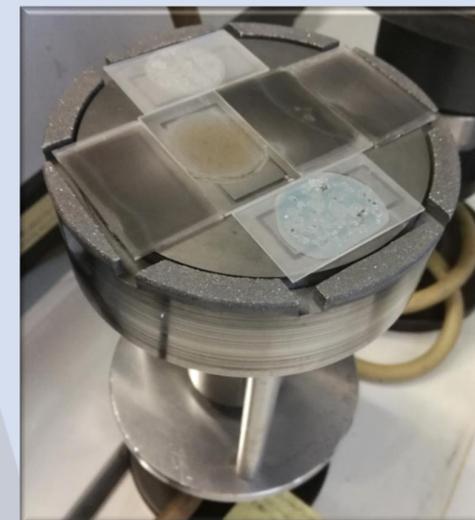
Pressure bracket



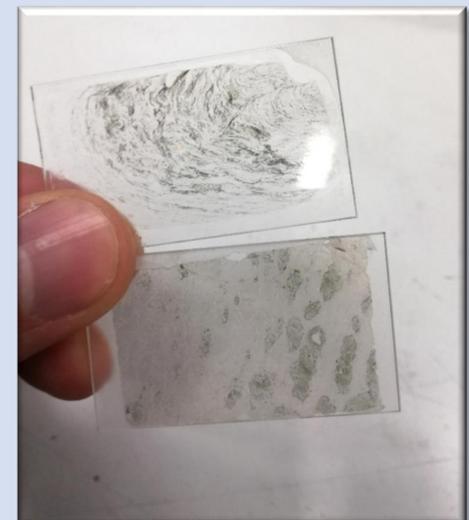
Sawn off sample



Jigs on the LP 50 Lapping System



Jigs bottom with thin sections



Finished thin section