

Preparation of specimen for simple thin sections.

Here is the description for preparing specimen for thin section of materials which are to be grinded in a simple way. In case of not meeting the following criteria, this instruction is not valid.

water-sensitive
porous
sensitive, i.e. very fragile
fatty or hydrophobic
without affinity to epoxy resins

Stones, rocks, minerals and fossils, however, can normally be handled in this way.

Rub first side. Use a lot of water for rinsing. Please watch out carefully for a good flatness and smooth surface.

Rinse carefully in order to remove loose material.

Then take a fine abrasive paper (grain 1000) and regrind manually wet (with water or better using isopropanol or ethanol)

Rinse carefully in order to remove loose material.

After that take a very fine abrasive paper (grain 2500) and slightly regrind manually wet on the grinding plate (with water or better using isopropanol or ethanol).

Rinse carefully in order to remove loose material.

Now take a very sensitive abrasive paper (grain 5000) and slightly sand it manually wet (with water or better using isopropanol or ethanol) on the grinding plate, do not grind it any more.

Rinse carefully in order to remove loose material.

If necessary purify your specimen in an ultrasonic bath.

In the following step place it in acetone for dehydrating, and then place it in oven at 60°C for drying and warming.

Mix a small quantity of Körapox 439 and warm the mixing vessel in an oven or on a hot plate at 60°C. By doing so the Körapox gets transparent and the air escapes. From now on you have to work very fast to avoid a premature hardening of the Körapox.

Prepare a clean microscope slide on a hot plate (60°C).

Cover the adhesive part of the heated specimen with Körapox and place it in the oven at 60°C for a maximum of 5 minutes. Thus bubbles from depressions of the grinded surface can be removed.

Then scrape off the Körapox with the bubbles and cover again with Körapox.

Turn the specimen obliquely in direction to the microscope slide and then tip it over slowly so that any air bubbles can escape from the sides.

It is absolutely essential to have 5 mm totally free and clean on both narrow sides of the microscope slide; because later there will be the glass placed on the setting plates of the setting device.

Now span the specimen onto the microscope slide in the mounting press. After the mounting press is completely full, put it into the laboratory oven at 80°C for 2 hours.

After this step suck the specimen onto the grinding mouse, adjust the feet and make the thin section. Do not forget to carefully rinse with water.

After grinding dry carefully with a hairdryer and if necessary stick a cover glass onto the specimen.