Preparation of bones and teeth

After having fixed the specimen in Formol, it has to be washed out carefully with tap water before further processing.

Saw the specimen as thin as possible. Divide the teeth along and across for a better penetration of alcohol, diethyl ether and acetone.
In the following baths the specimen has to remain for a minimum of 24 hours per 2mm thickness.

Dewatering in an isopropanol bath
Placed into 70:30 isopropanol: diethyl ether for further dewatering and degreasing.
Placed into 50:50 isopropanol: diethyl ether for further dewatering and degreasing.

Placed into acetone in which the specimen can be stored, too.

Rub first side by rinsing with isopropanol from a washing bottle. Please make sure to have good flatness and smooth surface.

Then rinse carefully in acetone 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 by using isopropanol.

Rinse carefully with acetone in order to remove loose material.

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

Rinse again with acetone in order to remove loose material.

Place it into an acetone bath.

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 place (60°C). Allow the specimen to drain carefully, if necessary dry excess fluid of acetone with a fiber-free cloth. When doing this, only touch the specimen at the rear side, not at the adhesive side.

Apply a small quantity of Körapox on the adhesive surface of the specimen and spread it without bubbles. Then turn the specimen obliquely in direction to the microscope slide, tip it slowly over so that any air bubbles can escape from the sides.

Please make sure to have 5 mm totally free and absolutely 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 put the specimen onto the grinding mouse, adjust the feet and make the thin section. Never use water but isopropanol or ethanol instead for rinsing (in an economic way from a washing bottle).

When using water you would risk the specimen to swell and fall away from the microscope slide.

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