

# Thin section preparation of soft sediments

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## Workflow:

- first step: sub sampling of 10 cm long and 1 cm thick sediment bars from the split core (**No. 1**) – sampled 2 cm overlap to achieve continuous records
- samples are transferred to labeled aluminum boxes (**No. 2**) and shock-frozen with liquid nitrogen
- samples are left for 48 hours in a freeze-dryer (the pore water is removed of the samples)
- the samples in the boxes are vacuum impregnated with epoxy resin and cured for 2 days (**No. 3**)
- ground sediment bar surfaces are then glued with the aid of pressure blocks on a glass slide - cured under pressure for 48 hours (**No. 4**)
- samples are then cleaned, labeled and sawn to a thickness of 200-100  $\mu$  using a WOCO diamond saw (**No. 5**)



1. Core half of lake sediment



2. sampled sediment blocks



3. sediment blocks – impregnated and ground shallow



4. glued samples under pressure blocks



5. saw sample with WOCO 50



6. samples on Logitech vacuum head PLJ7



7. lapping the samples to finale size with Logitech LP50



8. finished covered thin sections for microscopy – size 120 x 35 mm

- samples are finished (lapped) on a diamond vacuum head with siliciumcarbid abrasive to a final gauge of 35-25  $\mu$  (**No. 6; 7**)
- thin sections are cleaned, dried and covered with a cover glass
- finished thin sections ready for optical microscopy (**No. 8**)
- processing of thin sections varies depending on the sediment type
- hygroscopic samples such as salts and clays must be processed differently