

Electron microscopy service at the IZW

On request, the electron microscopy unit of the *Leibniz Institute for Zoo and Wildlife Research* (IZW) offers scanning electron microscopy (SEM) as well as transmission electron microscopy (TEM) investigations of various specimens from zoo and wildlife animals or other biological origin.

1. Requirements regarding sample collection and samples

Depending on specimen and required investigation technique, please contact us for advice on fixation and shipping requirements before submitting a sample.

The SEM (Zeiss Supra 40VP) is equipped with a variable/low pressure chamber that also allows the examination of fresh samples that have not been dried and coated with gold-palladium. Please note that image resolution of such specimen is acceptable, but of lesser quality compared to critical point dried and coated items.

The TEM (FEI Tecnai G2 Spirit) comprises 20-120 kV / LaB6 emission as well as digital imaging. Depending on the requested type of examination, specimen can be prepared as ultrathin sections or by negative staining.

All lab work is performed by an experienced EM technician.

2. Limitations and customer risks

To ensure best results, tissue specimens for TEM investigations must be submerged in fixative immediately after exenteration or death of the animal. Any delay in fixation will lead to (sub)cellular disintegration and may lower the quality of results or render the outcome of the investigations useless. Since the IZW has no influence on sample quality, customers will still be charged for the work performed.

3. Costs

The costs of the electron microscopy analyses are dependent on sample material and required technique. Please contact us for a cost estimate prior to submitting samples.

4. Warranties

Delivery and handling time of samples will be estimated upon consultation.

5. Quality management

Annual EQA is performed via ring tests comprising negative staining for virus diagnoses organized by the Robert Koch Institute, Berlin.

6. Contact

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