

## Evaluation of sperm quality

The andrological laboratory of the Leibniz Institute for Zoo and Wildlife Research (IZW) offers the evaluation of spermatogenesis and sperm quality by selected methods on a service basis. We are able to evaluate the rate of spermatogenesis by flowcytometric analysis of the ploidy state in testis tissue. To evaluate sperm quality, morphology, motility, membrane intactness, active mitochondria can be analysed as well as sperm concentrations.

### 1. Requirements regarding sample collection and samples

#### 1.1 Testis samples

To analyse the ploidy state in testis tissue, we require a minimum of about 0.1 g of frozen ( $\leq -20^{\circ}\text{C}$ ) testis tissue. **Please contact us before sample collection to ensure optimal results.**

#### 1.2 Sperm samples

To analyse sperm morphology, fixed samples or smears are appropriate. For functional analyses, unfixed preserved sperm samples are required. It is possible to isolate sperm samples from epididymis that should be transferred with or without testis to the lab cooled ( $4-6^{\circ}\text{C}$ ) without any additional liquid in a plastic bag or tube. To analyse sperm concentration fixed or unfixed sperm samples are adequate where sperm cells are not agglutinated.

**Please contact us in advance to discuss the best option for sample collection and possible outcomes from your samples.**

### 2. Limitations and customer risks

Fertilisation is a complicated process with many species-specific steps and aspects. Therefore, we can only provide protocols and reference values for those sperm/testis samples for which we have prior experience.

If a customer requests evaluation of a species for which we have no analytical expertise, we cannot guarantee reliable results. To minimize this risk, we ask the customer to provide us with additional samples for biological validation.

The costs listed above will have to be paid for all procedures we conducted, irrespective of whether the analyses are successful. However, we immediately stop the analyses if problems occur and consult the customer.

### 3. Costs

Testis sample (measurement of ploidy state): 10.00 €

The costs for sperm evaluation are dependent on sample material, requirements for validation as well as type and number of tests. **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

We use analytical methods that in many cases have been published in peer-reviewed journals and are generally accepted in andrological research. However, up to now, *in vitro* evaluation of sperm quality is not necessarily related to *in vivo* performance of the samples. Biological validation of the applied tests in any particular species/problem is the most important prerequisite for generating meaningful conclusions.

### 6. Contact

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