



Hormoneservice at the IZW



Use our expertise for your research on domestic, zoo and wild animals. The endocrine lab of the Leibniz Institute for Zoo and Wildlife Research (IZW) offers the measurement of steroid hormones in blood plasma and urine and fecal samples (non-invasive monitoring of hormones) on a service basis. We are able to analyse progesterone, estradiol, testosterone, cortisol, and corticosterone and their metabolites in urine and feces..

Blood samples

To analyse progesterone, testosterone, cortisol, and corticosterone we need a minimum amount of 50 μ l plasma. For the analysis of estradiol we need 0.2 ml plasma due to the low estradiol concentrations (in the pg range)..

Urine and fecal samples

For measurements in urine we ask for 1 ml of urine. For the analysis of fecal samples we use 0.5 g. In case of small mammals or birds sample amounts may be reduced. All samples have to keep frozen (-20°C) immediately following its collection, otherwise changes in metabolite concentrations may occur due to microbial activities.

Prerequisites

Please keep in mind that the secretion of cortisol / corticosterone follows diurnal and pulsatile patterns. Therefore, it is impossible to objectify adrenal activity (stress) in an animal based on a single sample. Therefore, samples should be collected over a longer time period. The same applies for reproductive monitoring. A single elevated progesterone concentration in samples of plasma, urine or feces does not necessarily indicate pregnancy, it may as well indicate the luteal phase of a cycling female. Thus a sample collection period exceeding the length of an ovarian cycle is necessary. To confirm pregnancy persisting high progesterone concentrations are required.

Limitations

Each animal species uses its specific way to metabolize steroids. To this so called biological validation of a non-invasive hormone measurement must be performed before a particular assay can be applied for monitoring reproductive activity in a valuable animal. Therefore we are unable to offer non-invasive hormone monitoring for each species. We can offer this service only for species where we already have experiences or ready-to-use analytical methods. Please note, that in case you aim to publish the results in a scientific journal the referees most likely ask for assay evaluation and biological validation

Costs

Blood sample (direct measurement)	5,00 €
Blood sample (measurement demanding extraction)	6,50 €
Urine samples (inclusive hydrolysis and extraction)	6,50 €
Fecal samples (inclusive extraction)	9,00 €

We are always busy to validate the techniques for more mammal species. If we have no analytical expertise for a species you are interested, assay development and validation are essential. This can be performed within the scope of cooperation and cost sharing. If you are interested on our hormone service for research or routine diagnostic please contact the endocrine lab of the IZW.

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