

Stable isotope analyses at the IZW

The Stable Isotope laboratory of the *Leibniz Institute for Zoo and Wildlife Research* (IZW) was established in 2006 and provides service for the analyses of $\delta^{13}\text{C}$, $\delta^{15}\text{N}$, and δD in solid organic samples, δD and $\delta^{18}\text{O}$ in water samples and $\delta^{13}\text{C}$ in breath samples.

Our equipment:

- Two Delta V Advantage (Thermo Finnigan, MAT, Bremen, Germany) connected in continuous flow with: Flash EA 1112 (Thermo Finnigan), High Temperature Pyrolysis (HEKAtech), GasBench (Thermo Finnigan).
- Microbalance (Sartorius)
- Two ringdown cavity laser spectrometers (Picarro)

1. Requirements regarding sample collection and samples

1.1 samples (note that exact mass depends on the elemental composition)

$\delta^{13}\text{C}$	~ 0.4 mg dried, homogenized, solids and breath
$\delta^{15}\text{N}$	~ 0.4 mg dried, homogenized, solids only
δD , $\delta^{18}\text{O}$	~ 1.1 mg free of residual fat, dried and homogenized, solids and liquids water samples distilled

1.2 Prerequisites

- Solid samples should preferably be loaded in an appropriate capsule and packed in 96 port microtiter plates.
- Gas samples should preferably be loaded in 12 ml vacutainer vials.
- You may use our facilities for loading your samples or we can do it for you.
- Please provide a sample list as an *Excel* sheet.

2. Limitations

None

3. Costs

Please contact us for a quotation prior to sending samples.

4. Customer risks

None

5. Warranties

Delivery and handling time of samples varies and will be estimated upon consultation. Analytical time depends on isotopic enrichment of samples, number of current projects and staff availability.

6. Quality management

We use state-of-the-art methods for stable isotope studies. Samples are routinely analyzed in duplicate. We include laboratory standards in the sequence of samples to detect and control for instrument offset and drift. In case of large deviations, sample runs will be repeated at no additional cost.

Our laboratory standards are calibrated against NBS22, USGS24, L-SVEC, IAEA-N1, -N2, -NO3

We regularly initiate and attend ring tests with collaborating labs.

7. Contact

PD Dr. Christian Voigt

Phone: +49 (0) 30 5168-517

E-mail: voigt@izw-berlin.de