

Terms and Conditions (“Nutzerordnung”) for the Helmholtz Laboratory for the Geochemistry of the Earth Surface (HELGES)

The Helmholtz Laboratory for the Geochemistry of the Earth Surface (HELGES) is part of section 3.2 “Organic and Earth Surface Geochemistry” at the GFZ Helmholtz Centre for Geosciences, Telegrafenberg, 14473 Potsdam, Germany.

To apply for a project involving sample analyses, the form ‘*HELGES Application for Isotope Ratio / Concentration Analysis*’ must be downloaded from our website, filled in and submitted for approval to the relevant lab-responsible scientist of the working group Metal Isotope Geochemistry or Cosmogenic Nuclides respectively. Before any approved lab work or analyses can start, detailed information on samples and any prior sample handling and preparation steps must be submitted to the supervising GFZ scientist.

By using our facility, you agree to the following terms and conditions:

1. Laboratory equipment and services

HELGES offers analyses of geological or environmental samples for element concentrations, metal isotope ratios or cosmogenic nuclide separation. Sample preparation for metal isotope ratios is performed in a metal-free clean lab equipped with laminar flow workstations for contamination-free sample treatment. For isotope ratio analyses, a Thermo Scientific *Neptune* Multicollector Inductively Coupled Plasma Mass Spectrometer (MC-ICP-MS) is used. For element concentration analyses, several instruments are available, according to individual sample requirements: a Varian 720ES axial Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES), a SpectroGreen radial view ICP-OES, a Thermo Scientific *iCAP-Qc* Quadrupole Inductively Coupled Plasma Mass Spectrometer (Q-ICP-MS), and a Thermo Scientific *Element2* Sector-Field Inductively Coupled Plasma Mass Spectrometer (SF-ICP-MS). Samples can be analysed either as solutions (e.g., water or dissolved rock) or solids, with a femtosecond laser ablation system (fsLA) available for *in-situ* microanalyses. For detailed information please visit our lab page <https://www.gfz.de/en/section/earth-surface-geochemistry/infrastructure>.

2. User types and analysis fees

The facility is available for external academic or other users or scientific research groups (hereinafter referred to as the “user”). GFZ scientist(s) will be involved in the analysis project, and will co-author publications (see 8). If applicable, visiting PhD students or postdocs shall conduct the lab work and analyses at GFZ by themselves, after initial training provided by GFZ staff. Publications shall indicate that laboratory work was done at the “Helmholtz Laboratory for the Geochemistry of the Earth Surface at the GFZ Helmholtz Centre for Geosciences” (see 8).

Prices are available upon request, and are calculated based on the user’s individual projects and sample specifications as indicated in the application (see also 4).

Use of the laboratory equipment and the conduction of analyses are provided exclusively for research purposes. Commercial projects are possible on basis of a separate agreement, with further details and adaptive pricing from the relevant lab-responsible scientists upon request.

3. Access to the HELGES laboratory

Based on the form ‘*HELGES Application for Isotope Ratio / Concentration Analysis*’, the GFZ will evaluate the user’s project and decide about the access to the HELGES-facility, based on specific



criteria as set out in the Application Form. The GFZ is free to decide whether to conclude a contract about the project and provide access to the laboratory. The GFZ will inform the user about this decision.

The user has to be aware that the agreed access to the sample preparation and analysis in the GFZ-laboratory can be canceled by the laboratory staff if the laboratory is not ready for use due to technical defects or personnel bottlenecks (s. also 6).

4. Project preparation

Before the start of the project, the user shall provide a list of the basic metadata (sample names, types, locations, sampling date, sample treatment, other relevant information on chemical or physical properties, etc.) to the supervising GFZ scientist.

5. Work safety issues

The users of the laboratory are instructed in the safety regulations before starting their work. The use of the laboratory may only take place after this safety instruction by the GFZ laboratory staff. The user has to acknowledge by signature that the operating instructions, the hazard assessments and the user regulations of the laboratory have been noted and understood.

Any breach of these terms and conditions, the Laboratory Regulations or the Occupational Health and Safety Regulations may lead to permanent exclusion from the laboratory use.

6. GFZ Liability

GFZ continually strives to provide high-quality data. Nonetheless, GFZ assumes no guarantee or warranty for a specific quality, completeness, reproducibility or a specific suitability for a specific purpose of the data, measurement results or evaluations. GFZ shall not be held liable in the event that results are subject of subsequent revision. The results are used at the user's own risk.

The GFZ is not liable for the loss, damage, destruction or other impairment of samples, materials or other items brought in or provided by the user. This applies in particular to cases of force majeure, technical malfunctions, equipment malfunctions, power failures, IT failures or other unforeseeable events. Storage within the meaning of Sections 688 et seq. of the German Civil Code (BGB) is not agreed.

The GFZ is not liable for the availability of the laboratory infrastructure at all times, the uninterrupted or error-free functioning of the laboratory infrastructure, individual devices, software, supply media (in particular electricity, gas, water, cooling) or other technical equipment, unless a material contractual obligation has been breached.

The GFZ is liable without limitation only in cases of intent and gross negligence. In cases of simple negligence, the GFZ shall only be liable for breaches of essential contractual obligations (cardinal obligations); in this case, the liability shall be limited to the foreseeable damage typical for this type of contract.

Liability for indirect damage, consequential damage, loss of profit, failure to obtain research results and other financial losses is excluded to the extent permitted by law.



The above limitations of liability also apply in favour of the legal representatives, employees and vicarious agents of the GFZ.

The exclusions and limitations of liability do not apply in the event of injury to life, limb or health, or in the event of mandatory statutory liability, in particular under the Product Liability Act.

7. User liability

The user must use the laboratory infrastructure, equipment and facilities of the GFZ with care, in accordance with their intended purpose and in compliance with all relevant safety, usage and operating regulations (see 5.). Instructions from laboratory staff must be followed.

The user is liable for damage that the user, his employees or other persons working on his behalf cause intentionally or through negligence to the laboratory infrastructure, equipment, materials or other facilities of the GFZ. In the event of simple negligence, the user shall be liable within the scope of the statutory provisions. If the GFZ has contributed to the cause of the damage, the distribution of liability shall be governed by Section 254 BGB.

The user must report a damage immediately to the supervising GFZ scientist and take all reasonable measures to mitigate the damage. The user is not allowed to repair a damage without prior consultation with the supervising GFZ scientist.

The user is obliged to reimburse the GFZ for the costs necessary to repair the damage in the above defined cases. These include in particular, but not limited to, repair costs, including replacement parts; costs of cleaning, decontamination or disposal; costs of necessary replacement purchases, if repair is not economically or technically feasible.

The GFZ is entitled to claim the costs incurred by the user on the basis of actual expenses or specific cost estimates. Further legal claims for damages by the GFZ remain unaffected.

8. Publishing of Data

The raw data, measurement results, analysis data, evaluations and other project related outcome (hereinafter referred to as 'data') generated in the course of using the laboratory are made available to the user for their own use.

The user is obliged not to distribute, disclose externally, or publish any data produced at GFZ before the supervising scientist has assured its quality and approved its release.

Unless otherwise agreed, the supervising GFZ scientist (and possibly other engaged persons) will be co-author on any publication containing this data.

Any publication or presentation at meetings or conferences (incl. abstract submissions) requires prior notice and agreement by the GFZ supervising scientist.

Publications shall indicate that laboratory work was done at the "Helmholtz Laboratory for the Geochemistry of the Earth Surface at the GFZ Helmholtz Centre for Geosciences".

The high quality of the user's data and rapid publication of the results are GFZ foremost priority.



The user is expected to publish a scientific publication of the data within a period of no more than two years after finalizing data generation. If the scientific publication has not been made within two years, the GFZ has the right to publish the data itself. The GFZ shall then publish the data in a manner that protects the legitimate interests of the user, in particular any confidentiality or property rights interests, provided that these have been notified in advance in writing.

In case of follow-up samples that relate to this project, the user is requested to submit a supplementary proposal that includes publication plans and a manuscript outline.

Users agree to follow the DFG guidelines for the publication of scientific data ('Guidelines for Safeguarding Good Research Practice', Deutsche Forschungsgemeinschaft, 2019).

9. Severability clause, applicable law, place of jurisdiction

Should individual provisions of these terms of use be or become wholly or partially invalid or unenforceable, the validity of the remaining provisions shall remain unaffected. Instead of the invalid or unenforceable provision, a valid provision shall be deemed to have been agreed which comes closest to the economic purpose of the invalid provision. The same applies to any contractual loopholes.

These Terms of Use are governed by the laws of the Federal Republic of Germany, excluding the United Nations Convention on Contracts for the International Sale of Goods (CISG).

For all disputes arising from or in connection with the use of the HELGES laboratory, the place of jurisdiction shall be Potsdam, to the extent permitted by law. Mandatory statutory places of jurisdiction remain unaffected.

Potsdam, 01. March 2026

GFZ Helmholtz Centre for Geosciences