

## About us

The Geosciences Barcelona-CSIC **Scientific and Technological Services** is a **research infrastructure facility** that supports **research activity** in **Geosciences**. We provide **state-of-the-art scientific equipment** operated by **highly qualified technicians**.

Our personnel and equipment are part of the **scientific and technical network of the Spanish National Research Council (CSIC)**, which is positioned to serve the **scientific community** and the national and international **industrial sectors**.

The efforts of our laboratories are targeted at **improving** and **expanding** the **offered methodologies**. Our staff promotes **training activities**, offering regularly **specialized courses** on different geoscientific techniques.

## Our mission

- ✓ To support research activity.
- ✓ To develop solutions for industry.
- ✓ To promote knowledge transfer.
- ✓ To provide technical advice.
- ✓ To opt for state-of-the-art technologies.
- ✓ To have highly qualified staff.
- ✓ To train newly specialized technicians.

## Contact



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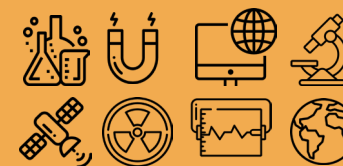
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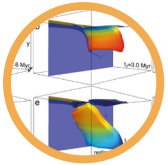
## Scientific and Technological Services





### Laboratory of Hyper-Spectral Imaging

This service includes hyperspectral images of hand samples and panoramic pictures of outcrops. Its main goal is acquiring 3D reflectance arrays ("hyper-spectral cubes") of relevant targets in the laboratory and the field. Our current equipment includes hyperspectral cameras and a portable spectrometer.



### Laboratory of Geodynamic Modelling

It offers high-performance computing applied to geodynamic and micro-dynamic processes, knowledge in the study of the lithosphere and upper mantle structure, geodynamic interactions with surface processes and polar ice deformation, locally-developed code, and expertise in scientific software development.



### Borehole Geophysical Logging Lab

A subsurface connection for cables and tools with the borehole and monitoring research lab inside the GEO3BCN building facilitates long-term and continuous monitoring and control from the lab. This facility is equipped with a complete system of geophysical logging tools and borehole monitoring data loggers that are used for testing and experiments.



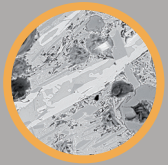
### Laboratory of Geochronology (Th-230/U-234)

The laboratory is equipped with alpha spectrometers with silicon surface barrier detectors to determine the age of carbonate rocks between 3,000 and 350,000 years old.



### X-Ray Diffraction Service

We are specialized in the characterisation of crystalline phases of materials using in situ X-Ray Diffraction and elemental analysis using a handheld X-Ray Fluorescence spectrometer. We provide analytical support to research groups and companies working in geology, materials science, industrial hygiene, construction, catering, and forensics.



### Laboratory of Optic and Electron Microscopy and Image Analysis - MICROLab

Our main goal is the physical and chemical characterisation of natural (minerals) and synthetic (alloys) materials across different working scales in order to facilitate the institute's research activity and meet external demands.



### Paleomagnetic Laboratory (CCiTUB-CSIC)

It provides technical support to research groups working in Geosciences. Its research lines include magnetostratigraphic dating, palaeomagnetism and AMS in fold and thrust belts, archaeomagnetic dating and geomagnetism, and magnetic properties of the sedimentary record.



### The SIMGEO Facility

SIMGEO Facility, the only one of its kind in Spain, aims to promote the use of experimental models to study geological processes -in particular, those which pose a risk to the population and environment or are related to energy and economic resources.



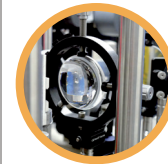
### Laboratory of Palaeoecology - PALAB

PALAB processes and analyses sedimentary samples for studies in Quaternary paleoecology, paleolimnology, radiocarbon dating (sample pre-treatment), archaeology, and biostratigraphy. The service is focused on preparing samples for palynological, diatoms and charcoal analyses. Microscopy facilities are also available for renting (self-service analysis).



### Seismic Laboratory - LabSis

It offers a Data Acquisition Pool composed of seismic instruments intended to be used in temporary deployments and a Seismic Processing Centre equipped with servers devoted to computation, management of storage systems, data distribution and near real-time data acquisition.



### Laboratory of Raman Spectroscopy and Photoluminescence

The physical properties of solids are characterized using the analysis of their vibrational spectrum obtained with light scattering experiments. The vibrational modes are 'fingerprints' of the crystalline structure, allowing qualitative detection of components and providing information about structural modifications.



### labGEO TOP - Geochemistry Service

We support multidisciplinary research in Geosciences for public and private institutions at both a national and international level by using high-performance laboratories and equipment. We have solid experience in solving the analytical challenges posed by geological and environmental samples.