



About Shared Instruments

The RIHN laboratory facilities have shared instruments, which are available for outside universities and research institutes, as well as for RIHN research projects.

Major Analysis Equipments

- Gamma-ray Spectrometer
- Thermal Ionization Mass Spectrometer
- High-resolution Multi-collector Inductively Coupled Plasma Mass Spectrometer
- Inductively Coupled Plasma Mass Spectrometer
- Isotope Ratio Mass Spectrometer connected with Elemental Analyzer
- Isotope Ratio Mass Spectrometer connected with High-Temperature Conversion Elemental Analyzer
- Isotope Ratio Mass Spectrometer connected with On-line Gas Inlet
- Ion Chromatograph
- Inductively Coupled Plasma-Atomic Emission Spectrometer
- Isotopic Water Analyzer

For inquiry about the RIHN laboratory facilities, please contact our E-mail or URL.

Contact information

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https://www.chikyu.ac.jp/laboratories/public_E/



Use the RIHN Laboratory Facilities

Environmental Measurements are the Basis for Integrated Research in the Field of Global Environmental Studies

Laboratory and Analysis Division (LAD) of Fundamental Research Department maintains the facilities and provides technical assistance in the Laboratory at the Research Institute for Humanity and Nature (RIHN).

RIHN views global environmental problems as matters of interaction between humanity and nature, as well as between human lifestyles and cultures. For this reason, RIHN collects information across various projects to promote the “integrated global environmental studies”.

Environmental measurements, conducted in the RIHN laboratory facilities with cutting-edge technologies, are essential for this type of research. Only through long-term monitoring of the global and regional environment does it become possible to delineate changes in interactions between humanity and nature, thereby enabling new discussions and exploration of solutions.

LAD plays a leading role in accomplishing the RIHN mission by cooperating with many research institutes and researchers from within Japan and abroad.

We hope that researchers can make optimal use of the RIHN facilities to achieve integrated research in the field of global environmental studies.

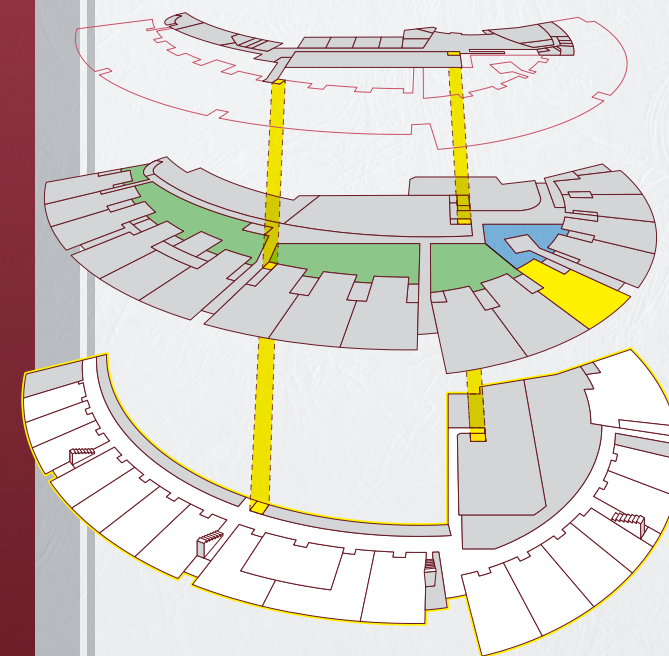


As of 1st April 2024



Research Institute for
Humanity and Nature
大学共同利用機関法人 総合地球環境学研究所
人間文化研究機構

RIHN Laboratory Guide



RIHN Laboratory Facilities Overview

Room 1 Temperature-controlled Room

Room 2 Biological Lab.1

Room 3 Microscope Lab.

Various types of microscopes and a high-precision micro mill are equipped for sample observation and collection.



High-precision micro mill

Room 4 Biological Lab.2

Room 5 Biological Lab.3

Room 6 Multi-purpose Lab.1

Various pretreatments, experiments, and measurements are conducted.



High Performance Microwave Digestion System

Room 7 Isotope Analysis Lab.1

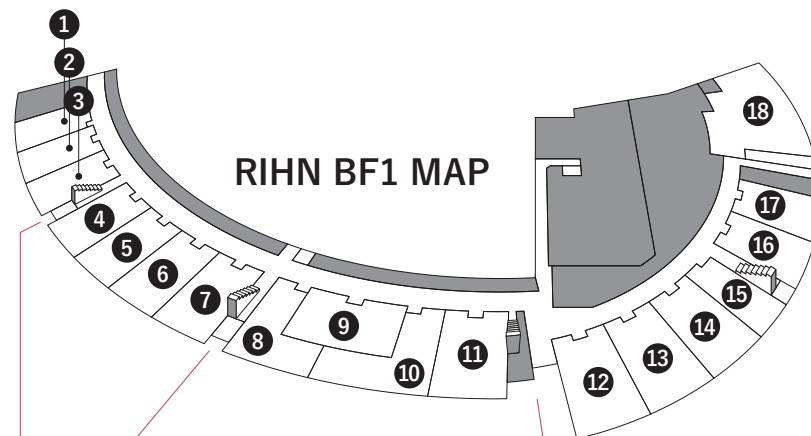
Two types of mass spectrometers are used to perform isotope-ratio measurements for metal elements. The intensity of gamma radiation is measured using a gamma-ray spectrometer.



Thermal Ionization Mass Spectrometry (TIMS)



High-resolution Multi-Collector ICP-MS (MC-ICP-MS)



Room 8 Isotope Analysis Lab.2

Isotope-ratio measurements for light elements (C, N, S, O, H) are conducted.



Isotope Ratio Mass Spectrometer connected with High-Temperature Conversion Elemental Analyzer (TC/EA-IRMS)



Isotope Ratio Mass Spectrometer connected with Elemental Analyzer (EA-IRMS)

Room 9 Chemical storage

Chemicals are stored. Samples and reagents are weighed and prepared.

Room 10 Chemical Analysis Lab.

Dissolved inorganic ions, multi elements, and stable isotope ratios of H and O in water are analyzed.



Isotopic Water Analyzer (CRDS)



Inductively Coupled Plasma Mass Spectrometer (ICP-MS)

Room 11 Sample Preparation Room

Various analytical samples are pretreated.



Plasma Asher

Room 12 Fieldwork Preparation Room

Supplies for fieldwork are stored.



Room 13 Multi-purpose Lab.2

Room 14 Clean Room

Advanced sample pretreatment is performed in an ISO-6 level clean room and ISO-5 level clean booths.



Room 15 Laboratory Storeroom

Room 16 Multi-purpose Lab.3

This room is available for desk work during the experiment.



Room 17 Sample Processing Room

Primary treatments are proceeded for field samples (soil, rocks, bones, plants, etc.).



Room 18 Sample Storage

Three temperature-controlled rooms (20°C, 5°C, -30°C) are available for various sample storages.



For more information, scan this QR code!



https://www.chikyu.ac.jp/laboratories/public_E/labo_shisetsu_top/