



Wadia Institute of Himalayan Geology

(An Autonomous Research Institute of Dept of Science and Technology, Govt of India)

33 General Mahadeo Singh Road, Dehra Dun

(<http://www.wihg.res.in>)

Wadia Institute of Himalayan Geology (WIHG) is an autonomous institute of the Department of the Science and Technology, Ministry of Science and Technology, Govt of India. During the last quarter century the Institute has grown into a centre of excellence in the Himalayan Geology. WIHG is recognized as a National Laboratory of international repute with well-equipped laboratories and other infrastructural facilities for undertaking cutting edge research in the country. The strength of the Institute include 62 scientists and about 40 research scholars working on diverse fields of Geosciences. The Institute has built state-of-the-art laboratory facilities to cater to the needs of the WIHG scientists as well as scientists/researchers from across the country on payment basis.

Laboratory facilities at Wadia Institute of Himalayan Geology

The Institute has the following major analytical facilities which may be used by the researchers of the country on payment basis. The charges of these analytical facilities are available on Institute website.

- **X-Ray Fluorescence Sequential Spectrometer (XRF – Bruker S8 Tiger)** for determination of major and trace elements in rocks/materials.
- **Inductively Coupled Plasma Mass Spectrometer (ICP-MS – ELAN-DRC-E)** for determination of major, trace and rare-earth elements.
- **Electron Probe Micro Analyser (EPMA – CAMECA – SX-100)** for quantification of element concentrations in minerals, WD spectra of minerals and generation of BSE and optical images.
- **Continuous Flow Isotope Ratio Mass Spectrometer (IRMS)** with attachments like Gas bench system, Gas Chromatograph, Elemental analyser and BrF₅ Laser Fluorination system for stable isotope analysis. Attachment of Keil Carbonate System to analyse samples with smaller amount.
- **Laser Ablation Multi-Collector Inductively Coupled Plasma Mass Spectrometer (LA-MC-ICPMS Neptune plus)**, with 193 excimer (ArF) Laser Ablation system for *in situ* micro-geochronology and isotopic studies of accessory minerals and solution mode isotopic analysis.
- **Scanning Electron Microscope (SEM – Zeiss EVO 40 EP with EDAX attachment)** to study the surface morphology of materials including micro fossils and minerals.
- **Laser Micro Raman Spectrometer – (Horiba JobinYvan – HR)** for Raman analysis of polyatomic species of solid and fluid phases for the applications in Geology, Mineralogy, Gems, Fluid inclusions and Archaeological studies.
- **X-ray Diffractometer (XRD – PANalytical, X-Pert PRO MPD)** with X'cellerator fast detector and Expert High score offline data processing software integrated with ICDD and ICSD database for search match and qualitative and quantitative phase analysis.
- **TL/OSL dating facility – Riso TL-DA-20 Reader** for Quaternary Geology and Archaeology.
- **Water Chemistry Laboratory** for water analysis equipped with Ion chromatograph, Spectrophotometer Portable Water Analysis Kit and Instruments for Bacteriological Analysis.
- **Geotechnical Laboratory** for characterization of basic engineering/geotechnical properties of soil and rocks.

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