

INSTRUMENT FACILITIES AVAILABLE AT THE INDIVIDUAL SAIFs

Sophisticated Analytical Instrument Facility, Gauhati University, Guwahati

Sl. No.	Instrument	Make/ Model	Major Specifications/ Accessories available	Type of measurement/analysis available
1.	X-ray Diffractometer (powder)	Philips X'pert Pro	Fully automated computerized powder XRD; X-ray tube: Cu; Angular range (2 θ): 2 $^{\circ}$ to 147 $^{\circ}$; High temperature attachment (range upto 1600 $^{\circ}$ C); Thin film attachment; ICDD database with PDF-1 & PDF-2	2 θ vs intensity plots/X-ray diffractograms; Quantitative analysis and other studies including phase identification, unit cell parameter determination, particle size determination etc.
2.	X-ray Fluorescence Spectrometer	Philips PW 1480	Computerized sequential XRF with 3 KW side window X-ray tubes (Rh & Cr-Au); Analysing Crystals- LiF200, LiF220, TLAP, PE, GE, PX1, PX2; Pulveriser; Hydraulic press; Fused bead making accessories; Muffle furnace etc.	Qualitative detection of elements from F 9 to U 92 ; Qualitative/quantitative analysis of silicate rocks and minerals, clays, limestone, cement etc. for major and minor oxides and traces.
3.	X-ray Fluorescence Spectrometer	PANalytical AXIOS	Computerized sequential XRF with 4 KW, Rh end window ceramic X-ray tube. Analysing crystals LiF 220, LiF 200, GE, PE, PX-1; Pro-trace software and set of standards for trace element analysis in Geological samples.	Qualitative detection of elements from O 8 to U 92 ; Qualitative/quantitative analysis of silicate rocks and minerals, clays, limestone, cement etc. for major and minor oxides and traces.