Electron Micro Probe Analyzer *EMPA*	Model: Unit and Room: Responsible: Further information:	*Cameca SX 100* *Mineralogy, Lab Build., R. 01009* *Dr. Hiltrud Müller-Sigmund* *http://www.minpet.uni-freiburg.de/sites/englisch/analytik/mikrosonde.html*

Short Description:

The EMPA allows nominally non-destructive, quantitative analyses of elements with Z>3 in solids; polished and conductive sample surface required (limited range of samples sizes, including 40mm round, 1 inch round, 48*28mm, max. thickness ca. 1 cm)

Available Experiments/Techniques:

- quantitative analyses
- element mapping
- concentration profiles
- (thin film and single particle analysis)

Picture of the Equipment

Special Equipment:

30 kV electron gun, W-filament
Five vertical wavelength-dispersive spectrometers
Integrated Link (Oxford) nitrogen cooled ED-system (element range Na-U)
Optical microscope: reflected and transmitted light optics and polariser
Edwards Auto 306 sputter-coater for carbon coating

Measurements on the equipment are currently done by:	☐ Students ☐ Students after Introduction ☒ Students after extensive training ☒ Trained scientific service personal
Recent Publications, where this instrument was important (optional): Give citation	Parat F. et al. 2010: Experimental constraints on ultrapotassic magmatism from the Bohemian Massif (durbachite series, Czech Republic). Contributions to Mineralogy and Petrology 159, 331-347.
Typical problems that may be solved with this instrument:	*element concentrations in solids, element distribution, thin film analysis*