

## Geolab Equipment List

- Analog-digital converter Quanterra Q330 (3units)
- Atomic Absorption Spectrophotometer ((VARIAN Fast Sequential AA280FS)
- Batch Flotation Cell (JK Tech)
- Cherchar equipment
- Climatic and Corrosion Chamber (Fitoclima 300 EDTU ARALAB)
- Constant Pressure apparatus (ELE)
- Core flooding unit (4 core holders; Pharmacia P-500 pump; Strata DCP-50 dual cylinder positive displacement pump; 1 Vinci 0,5L piston accumulator; Cloth heating jacket with temperature regulator  $T_{\text{máx.}}$  250°C; Arduino-based one phase fluid flow DAQ system)
- Cutting Mill (Retsch SM100)
- Diaphragm Jig (Sepor)
- Direct Tensile Machine device
- Drilling equipment to prepare core samples to mechanical and physical experiments
- Electrostatic separator
- Field sampling equipment (rock, soil and water sampling)
- Flat jack for In Situ tests RMU
- Flotation Column
- Gas permeameter (GP M100-A)
- Geiger portable counter (Radiation Alert – Inspector)
- Geophysics equipment for resistivity and induced polarization measurements (Keithley Instruments)
- Guralp 3ESP broadband seismometer (1unit)
- Guralp CMG-40T (4units)
- Heavy Media Separation Unit (Humbolt-Wedag)
- High Gradient Separator (Carpco)
- High Intensity Magnetic Separator (Frantz Isodynamic)

## Geolab Equipment List

- Hydraulic press FORM-TEST LEHRSYSTEME 506/1000/200 D
- Hydraulic press load capacity 100kN (ELE)
- Hydraulic Press load capacity of 10 t
- Hydraulic press load capacity of 1000kN (ELE)
- Hydrocyclone kit (Mozley)
- Induced Rolls Separator Magnetic MFG Co., Milwaukee, Wis., USA High intensity
- Ion Chromatograph with Auto-sampler ((DIONEX SP-2000i))
- Jaw crushers of different size (3 units)
- Leeds Flotation Cell (Capacity: 2,75 l + 1,95 l Other Characteristics: Odometer, Variable drive, speed Air flow meter )
- Magnetic Drum Separator (Sala)
- Milling equipment for powder preparation (Retsch)
- Mirror stereoscopy
- Muffle furnace,  $T_{\max}$  1100 °C (Ehret)
- Petrographic and metallography microscopes, equipped with camera Moticam 10.0 MP
- Point load testing equipment (ELE)
- Polished surfaces and thin section preparation equipment (cutting, grinding, polishing, and impregnation)
- Portable probes for pH / mV, conductivity, TDS and salinity measurements (WTW)
- Protodyakonov direct shear apparatus
- Rock shear testing machine (ELE)
- Rod and ball mills for rocks, ceramics and bricks
- Roll mill
- Slake durability equipment (ELE)
- Soil shear and consolidation equipment (ELE)
- Stereo microscopes

## Geolab Equipment List

- Surface roughness equipment
- Test sieves (Retsch) and sieve shaker
- Thermogravimetry- Calorimetric(TG- DSC) (Netzsch STA 409 PC LUXX)
- Titroprocessor 682 + 665 Dosimat (Metrohm)
- Triaxial Rock Testing System- High Pressure Triaxial Cell (GCTS HTRY-70)
- Ultrasonic Bath (Retsch)
- Ultrasonic Pulse transmission device (2 channel Digital Oscilloscope R&S HMO1002; 4 channel PC Digital Oscilloscope picoscope 2406B; Function Generator BK Precision 4011A)
- UV-Vis spectrometer (HITACHI)
- Vacuum, pressure and press filters
- Very broadband seismic sensors Streckeisen STS-2 (3 units)
- Vibrating Screen 90x30 cm
- Water purifying Millipore System (Merck)
- Wet Shaking Table Wilfley Table - Model A with sands table (100 cm\*50 cm) Motor: 1425 r.p.m /0.5Hp
- Wet Shaking Table Laboratorial capacity Motor: Howells (electric motors) Lda. (750 rpm / 0,25 Hp)
- Wet Shaking Table Wilfley Table - Model A with sands table (100cm\*50cm) Motor: 1425r.p.m /0.5Hp
- X-ray Diffraction equipment (Pananalytical)
- X-ray Microtomography System (SkyScan 1172 C)