

The "Laboratory of Analysis and Characterization of Solids" provides analytical -characterization services mainly for solids materials (e.g. catalysts, solid waste, industrial products, ores). The laboratory has been accredited with ISO 9002 for most of the analytical services that it provides.

AVAILABLE SERVICES

1. Surface morphology observation (magnification 10-300.000) with Scanning Electron Microscopy (SEM)
2. Microanalysis (local elemental analysis), element mapping and linescans with X-ray EDS
3. Crystalline phase identification with X-ray Diffraction
4. Unit Cell Size of Zeolites with X-ray Diffraction
5. Thermogravimetric Analysis (TGA), Differential Scanning Calorimetry (DSC) and Differential Thermal Analysis (DTA) of solid materials
6. Material Characterization with Temperature Programmed Methods (TPD-H₂, TPD-NH₃, TPO, TPR, pulse chemisorption). Detection with Mass Spectrometer (MS)
7. Elemental analysis of aqueous solutions, inorganic solid materials and organic materials with Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP-AES)
8. Surface Area (BET) measurement, Area and Volume of micropores (t-plot method) and Pore Size Distribution with nitrogen sorption
9. Pore Volume, Pore Size distribution and Surface Area with Mercury Porosimetry
10. Particle Size Distribution measurement with laser diffraction (wet and dry dispersion methods) and sieving
11. Milling of Solids
12. Supported Catalyst Preparation with the Dry and Wet Impregnation methods