

Testing and analysis Lab



CTTC's Analysis Lab provides a complete selection of characterization means for ceramic powders and specimens. It allows investigations and controls for each step of the process.

This activity is performed under the ISO 9001 quality management system.

OUR SERVICES

- A guide to perform only the analyses strictly necessary for the project
- Quality service from the creation of a personalized analytical protocol to the presentation of the results that best suit the request
- Reactive organization of work to answer to emergencies in the shortest time
- Traceability of protocols and analysis results
- The guarantee of result reliability
- The full force of CTTC's experience in ceramic materials and processes

SOME EXAMPLES

- Analysis of ceramic parts and raw materials
- Expertise of defects
- Optimization or control of the manufacturing process
- Equipment test, prototyping

OUR MEANS

- Laser Granulometer
(measuring range 10 nm to 3,5 mm)
- Specific BET surface and powder mesoporosity analyzer
(2-50 nm)
- Chemisorption apparatus
(catalyst analysis using TPR, TPO, TPD and pulsed chemisorption, -50-1100 °C)
- Acoustophorometer (measurement of Zêta potential, slurry loading from 0.1 to 60 vol%)
- Helium picnometer (density measurement)
- Rheometer (flow behavior in suspensions or in ceramic pastes, Peltier -5 to 200 °C)
- Spectrometer FTIR (8000 to 340 cm⁻¹)
- Scanning electronic microscope
(SEM coupled with an electron probe microanalyser, EPMA)
- Mercury intrusion porosimeter (determination of the open porosity and the pore size distribution down to 3.6 nm)
- X-ray diffractometer
(fast detector with a resolution of 0.02 °)
- High resolution numerical microscope
(dimensional control and 3D observation)
- Thermobalance (TGA - DTA - DSC up to 1600°)
- Thermomechanical analyzer (TMA, up to 1750 °C)
- Differential dilatometer (until 1600 °C)
- Mechanical test bench (3 or 4 points flexural strength compression tests)
- Testing equipments for preparation, shaping and thermal treatment of ceramic materials

1. TMA
2. Electrophoretic deposition testing
3. Specific BET surface analyser
4. X-Ray diffractometer

