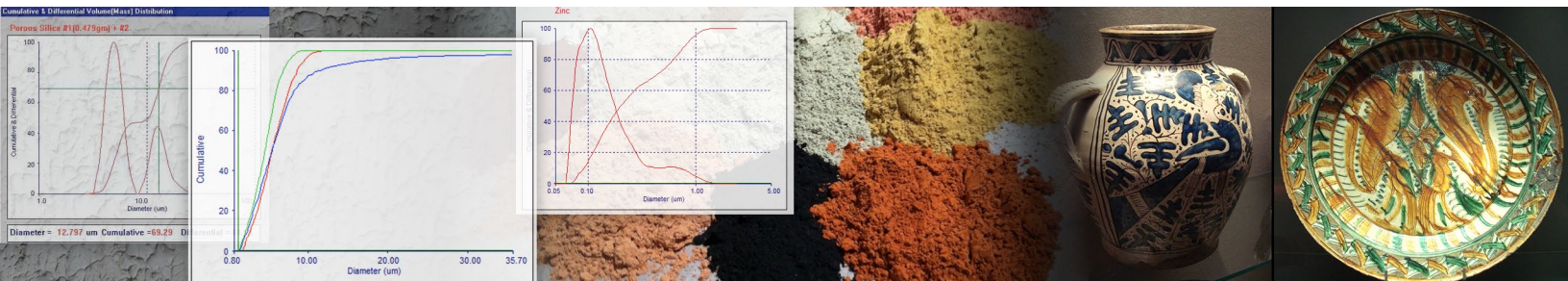


Brookhaven's BI-XDC Convenient, Quantitative, High Resolution X-Ray Particle Sizing



Based on first principle, the **Brookhaven Instrument BI-XDC** is the only X-Ray disc centrifuge that measures particle size without calibration or absorption correction. **The high resolution instrument can resolve peaks as close as a 15% size differential and quantify distribution accurately.** Homogeneous start with scanning head makes for quick measurements.

The Brookhaven BI-XDC is the ideal instrument for QC, QA and research. The instrument combines gravitational and centrifugal sedimentation for fast, accurate size distribution from nanometers to tens of micrometers. The scanning X-ray head speeds up measurements for a typical 8 minutes measurement. The X-ray detection gives high accuracy, no optical corrections, quantitative measurements. The BI-XDC features a reproducible digitally controlled disk speed for best performance and accuracy. Merging the centrifuge and gravity mode covers a broad size range from 0.01 to 100 microns.

- Oxide nanoparticle
- Metal oxides and metal powders
- Alumina & alumina ceramics
- TiO₂ suspensions
- Nanoparticle zirconia suspension and polycrystals
- Super-paramagnetic iron oxide nanoparticles (SPION)
- Tungsten nanoparticles
- Abrasives
- Nanosize ceramic particles
- Cerium dioxide nanoparticles
- Metal phthalocyanine nanocomposites
- Silicon Carbide, Silicon Nitride sizing
- Gelcasting particle size
- Grinding effects on ceramics size
- Minerals
- Clays

Based on the principle of photosedimentation, the BI-XDC measures the size of particles according to the time the particle takes to sediment in the detector according to Stokes law. By providing both centrifugal and gravitational sedimentation in one instrument the BI-XDC brings these well-established methods of particle sizing up to date for today's fine particle technology. With an X-ray technology to give error free quantitative measurements, fast and accurate size distributions across the "one-micron" transition region are easily obtained. Now, with a single instrument you can get true high resolution, accurate, particle size distributions from 10 nanometers right up to 100 microns. Brookhaven's advanced scanning detector technology and wide disc speed range lets you optimize analysis times and broaden the range of samples you can analyze.



With the Brookhaven BI-XDC there are no optical corrections and no optical properties to worry about, just a simple mass sensitive response based on X-ray absorption. The BI-XDC is a great alternative/orthogonal method.

Specifications

Analysis	Size range of 0.01 to 100 μm , depends on particle and liquid density and liquid viscosity Measurement time of 3-30 min, typically 8 min/decade in particle diameter
Software	Windows XP, Windows 7 or Windows 8
Instrument	Microprocessor controlled digitally driven electronic motor. Digital readout for setting and monitoring speed. Speed continuously variable from 500 to 10,000 rpm. Speed accuracy and stability better than + 0.01%. Scanning head speed: 0.05-10 mm/min, 1 mm/min typical Temperature sensor and digital readout. Dual purpose integral strobe
Disc Cavity	Polymethylmethacrylate with stainless steel hub. Dynamically balanced over range of rotational speeds. Spin fluid volume from 10 to 30 mL. Solvent resistant disc available
Power Requirements	100/115 VAC, 220/240 VAC, 50/60 Hz, 1,000 Watts
Dimensions	260 x 500 x 600 mm (HWD)
Weight	35 kg
Certifications	CE Marked



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