

Nicomp[®] N3000 & AccuSizer[®] A7000

High resolution particle size analysis

AccuSizer A7000 Single Particle Analyzer

The AccuSizer[®] product line is based on our unique single particle optical sizing (SPOS) technology. The SPOS systems can be used as liquid particle counters for contamination applications or as sophisticated particle size analyzers of suspensions.

All AccuSizer systems consist of a sensor, pulse height analyzer (counter), and fluidics to transport the sample through the sensor. Particles flowing through the sensor scatter and obscure the incident laser beam. This light interaction creates pulses that are proportion to the size of the particle. The counter converts these pulses to particle size.

Sensors

LE400 sensor	Collimated beam	Scattering and obscuration	0.5–400 µm
FX	Focused beam	Obscuration	0.7–20 µm at high concentration
FX Nano	Focused beam	Scattering	0.15–10+ µm at high concentration



Counter

The counter provides high resolution results in up to 1024 size channels.



Fluidics

The sample can be transported through the sensor either without dilution, or with single- and two-stage autodilution samplers.

Systems

A7000	Two-stage autodilution particle size analysis for high concentration samples
A7000 SIS	USP <787>, <788>, or <789> testing of parenteral drugs or ophthalmic solutions
A7000 AD	Single-stage autodilution for general particle size analysis applications



The Nicomp N3000 DLS Particle Size Analyzer

The Nicomp® dynamic light scattering (DLS) system measures the size and zeta potential of particles from 0.3 nm–10 µm. Commonly analyzed samples include nanoparticles, emulsions, colloids, and proteins. Many unique features make the Nicomp the DLS system of choice for research and routine submicron particle size analysis.

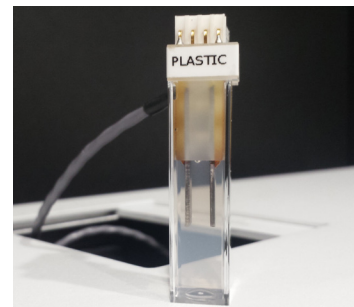


Particle Size

DLS systems can be designed for high resolution/ sensitivity or high repeatability, not both. The Nicomp DLS system has always been focused on high resolution. The unique Nicomp algorithm is capable of resolving close multi-modal distributions missed by other instruments.

Zeta Potential

The Nicomp utilizes patented DSP based phase analysis light scattering (PALS) to determine the zeta potential of suspensions and emulsions. Our dip cell approach allows for low electric field strength measurements in either constant voltage or current modes that are gentle on samples and reduces electrode degradation.



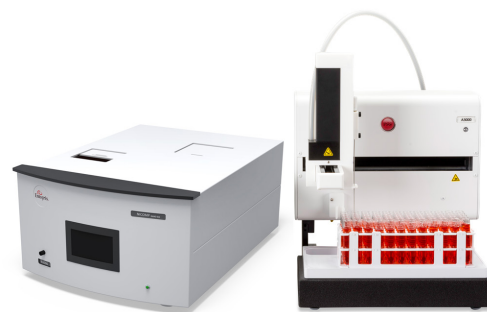
Autosampler

Integrate the Nicomp with the Autosampler to automate your high sample load requirements. Coupled with autodilution, this provides complete automation of even concentrated samples.

Unique Features

No other DLS system offers exclusive capabilities such as:

- The Nicomp multi-modal algorithm
- Autodilution
- Multi-angle goniometer
- Autosampler
- Online DLS systems



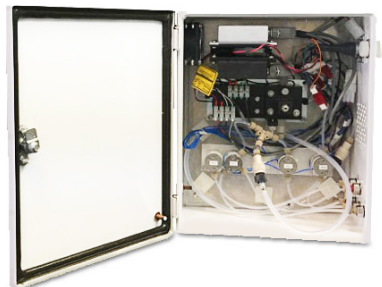
Online Particle Size Analyzers

Both the Nicomp DLS and AccuSizer SPOS technologies can be used as online analyzers in the process environment.

Online DLS: A pressurized 0.25" sample line enters a variable diluter where the diluent automatically adjusts the concentration to the optimum range for the measurement. The diluted sample enters the scattering cell where the DLS measurement is performed. Once the measurement is completed the sample is pumped to drain, the system is cleaned and another measurement is initiated. This approach has been successfully utilized to measure droplet size downstream of a high pressure homogenizer in the pharmaceutical industry.

Online SPOS: The AccuSizer Mini is installed in fabs around the world for online monitoring of particle size and count in CMP slurries. The Mini is typically used at point of use downstream of a filtration or distribution process. These same online AccuSizer systems can be integrated into many other industrial process environments.

Start achieving ultimate confidence in your results with our complete family of Particle Analyzers.



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