



# BioDLS

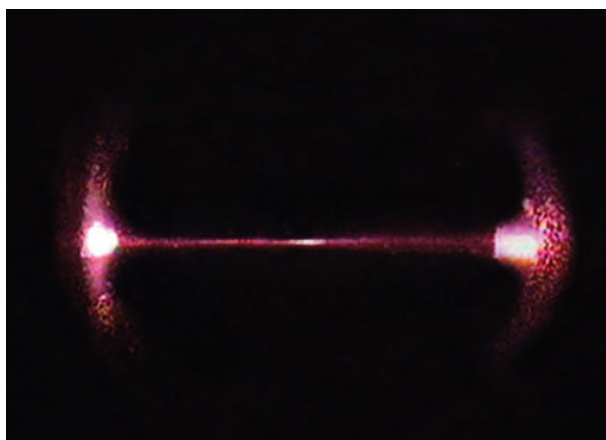
- High-throughput characterization
- Proteins, peptides, and other particles
- Aggregation or formulation studies

Particle sizing by dynamic light scattering, is an invaluable technique for formulation characterization and aggregation studies. It works with unmodified, undiluted samples. It offers exquisite sensitivity to enable detection of even the initiation of aggregation, information that is invaluable to the pharmaceutical scientist concerned about loss of activity or immunogenicity in pharmaceutical preparations, or to be the pharmacologist screening for potentially therapeutic inhibitors of aggregation. Until recently, however, the power of this technology has not been capable of meeting industrial throughput requirements.

Now, Brookhaven Instruments, the company that has pioneered fundamental innovation in light scattering for thirty years, is proud to announce the release of the **BioDLS**, an instrument that combines the power of dynamic light scattering with modern automatic liquid handling to yield unsurpassed convenience and accuracy in formulation characterization and aggregation assays.



The **BioDLS** allows automatic particle sizing using industry-standard well plates. The precision controlled sample transfer mechanism allows the user to select any arbitrary well to initiate the experiment, transferring as little as 2  $\mu\text{L}$  sample volume is required for a measurement, and allows recovery of the transferred sample. Samples can be stored in up to two 384-well plates in an independently temperature-controlled compartment, and up to 768 samples can be transferred automatically to the flow cell without user intervention. The measuring cell has independent temperature control, allowing thermal studies related to stability and aggregation on individual samples. These features, coupled with the high-throughput fluid handling, allow the sensitivity, precision, and accuracy required for biotechnology and pharmaceutical research on proteins, peptides, viruses, and antibodies.



Nanoparticle in flow cell

# BioDLS

## Benefits

- Automate experiments and obtain results rapidly
- Conserves precious samples
- Perform experiments with no consumable costs
- Detect aggregation at its onset
- Analyze samples without dilution
- Use without chemical modification of substrates
- Minimize toxic chemical exposure with robotics
- Interpret data using established theory

## Specifications

Size	Hydrodynamic radius ( $R_H$ ) of 0.5 nm to 3 $\mu$ m, sample dependent
Molecular Weight	0.4 kDa to 20 MDa, sample dependent
Sample Concentration	0.1 to 100 mg/mL, sample dependent
Sample Volume	2 $\mu$ L, sample dependent
Sample Format	Standard 12, 48, 96, and 384 well plates, or HPLC sample vials; accepts mixed variety and plate sample delivery
Samples Per Run	768, 2 x 384 maximum
Flow Cell Temperature	4 $^{\circ}$ C - 90 $^{\circ}$ C
Storage Chamber Temperature	Ambient to 4 $^{\circ}$ C; optional
Laser	35 mW @ 635 nm; standard 30 mW @ 850 nm; optional Variable output power stabilized
Scattering Angle	90 $^{\circ}$
Detector	BI-APD, Avalanche Photo Diode
Correlator	Brookhaven Instruments TurboCorr
Weight	28 kg without storage cooling option 30 kg with storage cooling option
Dimensions	300 x 510 x 630 (WDH in mm) without storage cooler 300 x 575 x 630 (WDH in mm) with storage cooler
Environmental Characteristics	Temperature: 10 $^{\circ}$ C to 75 $^{\circ}$ C, non-condensing humidity



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