

Particle sizer and Tracking analyzer

Instrument should provide an easy-to-use, reproducible platform for nanoparticle characterization. The instrument allows rapid analysis of the size distribution and concentration of all types of nanoparticles from 0.01 - 1 μm^* in diameter, depending on the instrument configuration and sample type. Sample temperature is fully programmable through the Nanoparticle Tracking Analysis (NTA) software.

The fully software-controlled filter wheel means automated analysis of fluorescent markers can be performed while walk-away. NTA measurements for multiple samples can be performed when used with the Sample Assistant accessory

- Measure over 1000 particles in just 60 seconds.
- Particle by particle analysis for high resolution size and concentration.
- Visual validation of results gives extra confidence.
- User friendly software with easy set up of SOPs for routine use.
- Minimal sample preparation.
- On board temperature control.
- Choice of laser wavelengths.
- Add up to 5 additional filters in a motorized wheel for flexible fluorescence detection capability.
- Complies with Industry Standards ISO 19430:2016 and ASTM E 2834:2012

SPECIFICATION

General

Sample Type	Sizing: nano particle and colloidal-sized materials, in any non-absorbing liquid. Zeta potential: proteins, nano particle, polymer and colloidal-sized materials, suspended in any non-absorbing liquid, with relative permittivity (dielectric constant) > 1.5 and viscosity < 30cP.
Wavelength	: 405nm (violet), 488nm (blue), 532nm (green) or 642nm (red).

Temperature control range	: -5 ° C to 110 ° C, ± 0.1 ° C, active control.
Sample Cells	: Sizing: 1 to 3 mL disposable plastic, 50 µL disposable, 40 µL quartz flow cell, 10 µL quartz minimum Zeta potential: 180 µL, 600 µL, 1250 µL
Stage	: Fixed stage.
Focus	: Computer controlled motorized focus.
Camera	: sCMOS.
Fluorescence	: Motorized filter wheel with choice of up to 5 filters.
Syringe Pump	: Regulate the flow rates ranging from 10µl/min to 1900 µl/min with 1ml syringes in continuous flow mode measurement.

SIZE SPECIFICATION

Measuring principle	: Dynamic light scattering (DLS)
Particle size	: 10nm - 1000nm* or better
Concentration range	: 10 ⁶ to 10 ⁹ particles per mL. or better
Minimum sample volume	: 12 µL or less
Power	: 100V - 240V
Accuracy	: Better than ± 2% on NIST traceable std.
Repeatability	: Better than ± 2% on NIST traceable std.

ADDITIONAL MEASUREMENT

- Measurement of Refractive Index for accurate entry of RI values during particle size and zeta potential measurements.
- Measurement of Transmittance to automatically select measuring angle, sample cell focal point and other optical parameters.

SOFTWARE

User friendly, preferably windows based presentation of input parameters, results and analysis on a single page, measurement comparisons facility, customizable templates.

OTHER

Installations: At least 15 satisfactory installations should be there supported with at least 5 satisfied user certificates.

Services: Should have office have service team available within range of 50 kms.

Warranty & CMC: 3 years std warranty should be quoted. The supplier should also provide CMC for the next 2 years.