

# NanoSight NS300



The NS300 utilizes the latest version of NanoSight's particle characterization technology, Nanoparticle Tracking Analysis (NTA). This elegant new instrument offers the unique benefits scientists have come to expect from NanoSight in a compact format, with the major benefit of enhanced fluorescence capability.

It can visualize and measure particles in suspension in terms of size, light scattering intensity, fluorescence and count, and does so particle-by-particle in the range 10-1000 nm (material dependent). This addresses the needs of a wide variety of applications including protein aggregation, exosome and microvesicle research, and drug delivery systems. It contributes to characterization under the new EU Definition of Nanomaterials, and is particularly suited to the analysis of particles labeled with fluorescent quantum dots.

The NS300 is the natural progression from the NS500 and LM10. It takes the most popular features of these instruments and combines them into an easy to use, compact format. We then added in the high capacity motorized fluorescence disc.

## Compact

With a footprint measuring just 40 cm by 25 cm, the NS300 comes complete with a high sensitivity sCMOS camera, temperature control and a choice of laser wavelength. The sample chamber and laser block are designed to be readily removed, to enable easy cleaning and high throughput. The NS300 complements the NanoSight family of instruments by providing an answer to researchers whose laboratory space is at a premium, without compromising on quality or functionality.

## Fluorescence

The motorized filter disc, capable of being programmed from within the software to present up to six different fluorescent filters, will facilitate a more detailed assessment of fluorophores. It will give users the possibility to analyze each fluorescence population in terms of size and concentration; this ability to identify co-localized fluorophores will greatly enhance specificity and the ability to Phenotype.

## Rheology

The software's new rheology feature can measure viscosity in the range 0-5 centipoise, using probe particles to inform on non-Newtonian liquids in a shear-free manner, so being specifically applicable to the formation processes of hydrogels.



## Features and Benefits

- Choice of 4 laser wavelengths
- Multiple Filter Array
- New rheology feature
- Easy cleaning of sample chamber
- Rapid analysis of up to 6 fluorophores
- Measure viscosity 0-5 cPs



## Technical Specifications at a Glance

### LM14 Nanoparticle Viewing Unit:

- Integrated focused, polarized and triggered 405 nm, 488 nm, 532 nm or 638 nm laser illumination
- Integrated peltier elements
- Integrated thermistor

### On-board Temperature Control

- Peltier controlled with a PID feedback loop
- Temperature range: 15°C to 55°C
- Time to within 1°C of target temperature: < 2 min
- Accuracy: <1°C

### Computer Controlled Motorized Focus

- Location memory for rapid focusing (<5 second) following loading of sample chamber

### Computer Controlled Motorized Filter Wheel

- Containing a clear and either 650/565/430 nm long pass filter

### Scientific CMOS Camera

- Super high sensitivity Scientific CMOS device
- Extends the range below 30 nm, thus allowing much smaller particles to be detected versus standard CCD cameras.

### Option of Two Removable Top Plates

Either

- Two component laminar flow top plate optimised for sample changing without breaking apart. Aqueous samples only.

Or

- One component top plate designed for break apart and cleaning between measurements and compatible with solvent use.

## Accessories Pack

- Standard samples
- All relevant manuals (hard and soft copy)
- Re-installation USB Stick
- 3 spare software activations

## NanoSight NS300 Chassis

- Power supply (Input 100-240V, 50/60Hz)
- USB 2.0 input/output
- Firewire B output
- Integrated LED status panel