

NANOSIGHT LM20

NANOPARTICLE ANALYSIS INSTRUMENT

Unique Nanoparticle visualisation and analysis, in real time, at low cost and with virtually no preparation.

The NanoSight system provides both a direct, real time view of nanoparticles and a comprehensive particle-by-particle size distribution analysis. Both these data sets are unique to NanoSight.

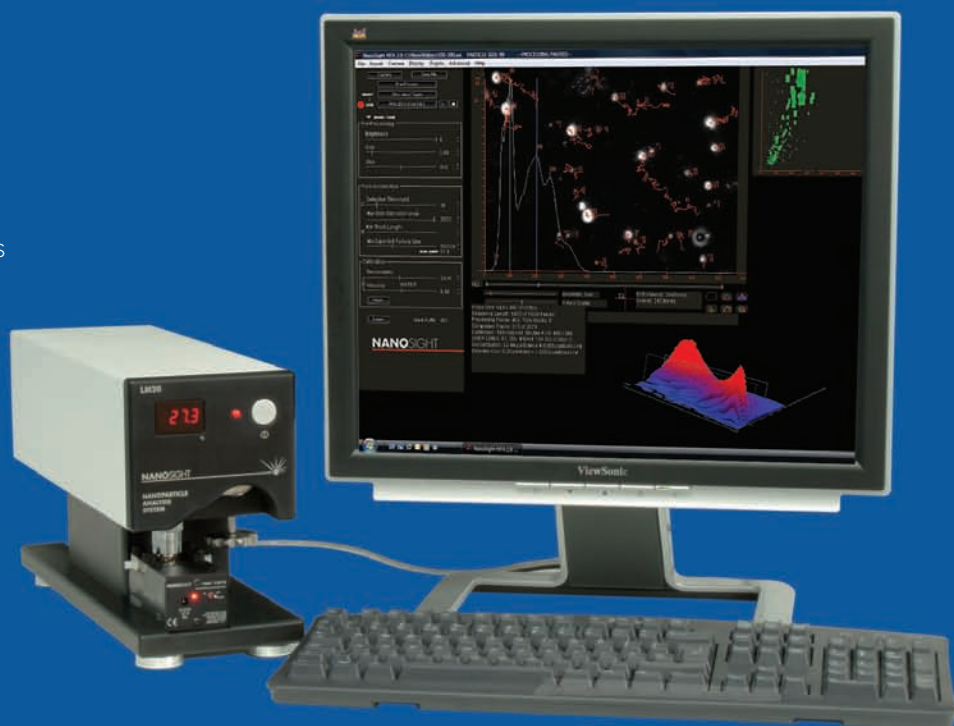
The LM20 is proven with most nanoparticle classes, down to 10nm (dependent upon particle type), and dispersed in a wide range of solvents.

Applications include:

- Ceramic and metallic nanoparticles
- Pigments, paints and sun creams
- Drug delivery particles
- Viruses
- CMP Slurries
- Colloidal suspensions and polymer particles
- Cosmetics and foodstuffs
- Particles in fuels and oils (soot, catalyst, wax etc.)

Nanosight brings unique insight at submicron level, and provides a new characterisation capability that goes beyond PCS/DLS in assessing polydisperse systems.

NANOSIGHT..... seeing is believing



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...seeing is believing



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Technology: Nanoparticle Tracking Analysis (NTA)

The LM20 uses a laser light source to illuminate nano-scale particles. Enhanced by a near-perfect black background, particles appear individually as point-scatterers, moving under Brownian motion.

Polydisperse and multimodal systems are instantly recognisable and quantifiable, as are agglomerates and contaminants.

The image analysis NTA software automatically tracks and sizes the nanoparticles on a particle-by-particle basis. Results are displayed as a frequency size distribution of population graph, and output to spreadsheet. Video clips of images are recorded and retained.

Straightforward to Use

The Instrument consists of LM20 unit with computer control and display screen.

500µl of sample of suitable viewing concentration is introduced into the viewing cell with a disposable syringe. A view of particles in motion is seen directly. The NTA image analysis software then rapidly determines the particle size.

Alongside PCS

The LM20 resides in research laboratories world-wide often alongside Photon Correlation Spectroscopy (PCS or Dynamic Light Scattering) instruments. NanoSight's technology brings:

- An information-rich view of particles in motion.
- Sizing directly from individual analyses of many particles.
- Polydisperse systems can quickly be identified and resolved.
- This is an absolute method so no calibration is required.
- No refractive index data is required.
- No disposables and significantly lower purchase cost.

LM20 Specification:

Liquid Phase Instrument

- Nano-particle analysis range: 10nm - 1,000nm, dependent on particle material
- Particle type: any
- Solvent: any non-corrosive solvent and water. A range of solvent-resistant seals are available.
- Temperature controlled sample cell, ambient to 50°C (optional)
- Power requirements: own adapter supplied
- Laser output: 30mW at 640nm (Class 1 Laser Product)
- Sample volume requirements: 500µl

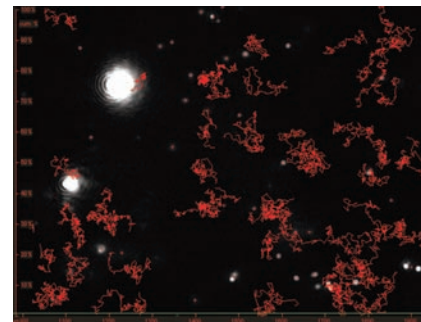
NTA Analytical Software suite provides:

- Real-Time dynamic nano-particle visualisation
- Particle-by-particle analysis
- Particle counting and sizing
- Particle scatter intensity vs. count and size (3D plot)
- Particle size distributions displayed as histograms, and output to spreadsheet
- Full reporting and batch processing facilities

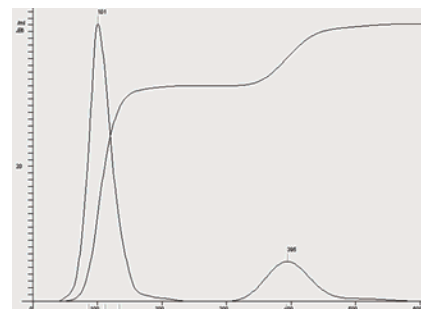
NanoSight work continuously in product development, so specifications are liable to change. Contact us for the latest update and applications information.

About NanoSight:

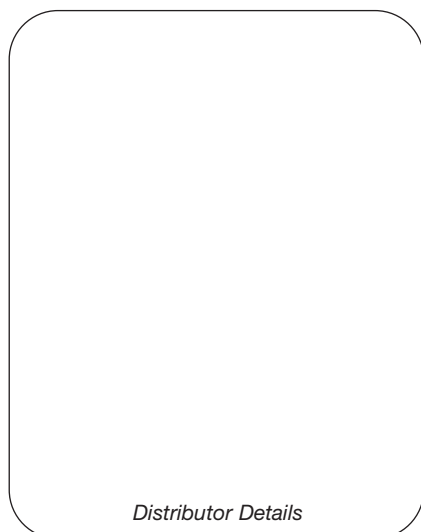
NanoSight was founded in 2002 to develop nanoparticle detection techniques around a suite of patents. A major international defence contractor was an early licensee, applying NanoSight's technology in virus detection. In 2005 NanoSight was one of a few UK businesses to be awarded a government nanotechnology research grant. NanoSight has a growing base of well over 100 users worldwide. Worldwide distributors are listed at our website: www.nanosight.co.uk



An image of a suspension of a 100nm and 400nm mixture of polystyrene particles with the trajectories of the 100nm particles shown, and from which their size is estimated. The larger 400nm particles can clearly be differentiated from the smaller particles.



Screen shot of particle size distribution plot of a mixture of 100nm and 400nm polystyrene particles analysed by NTA 2.0 nanoparticle tracking analysis software (peak modes at 101nm and 395nm respectively). The two population peaks can clearly be identified. Also shown is a cumulative undersize information for this distribution. See the moving images at www.nanosight.co.uk



Distributor Details