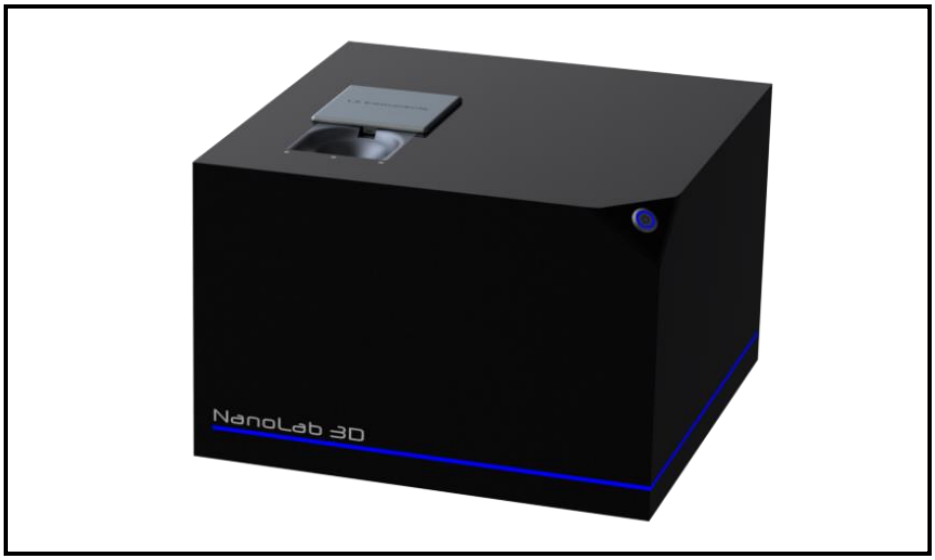
NanoLab 3D

The NanoLab 3D is a compact DLS particle sizer that measures at a scattering angle of 90°. Based on ground-breaking 3D modulation technology, it allows measurements at a wide range of concentrations, from dilute to highly concentrated soft materials such as nanoparticles, polymers, proteins and emulsions. User friendly software combined with an ergonomic sample chamber design facilitates operation and since no sample preparation (dilution) is required the NanoLab 3D ensures a high sample trough-put.

Standard applications include:

- Particle sizing 0.15 nm – 5 microns (hydrodynamic radius)*
- Colloidal systems, such as: nanoparticles, polymers, proteins and emulsions
- Measurement of polydispersity
- Process monitoring (e.g. gelation, aggregation, ageing…)

* maximum range, sample dependent



NanoLab 3D

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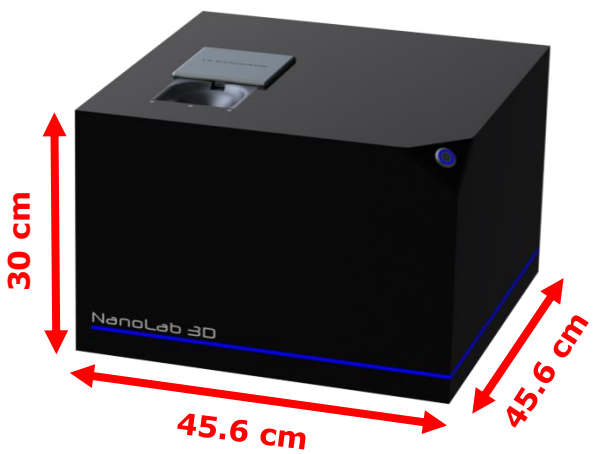
Specifications

- The NanoLab 3D performs dynamic light scattering (DLS) at 90° scattering angle.
- Particles sizing from 0.15 nm to 5 µm radius*
- Three cuvette holders for standard cuvettes of 3x3, 5x5 and 10x10 mm.
- Suitable for sample volume from 90 µL to 2 mL
- Temperature controlled sample chamber operating at 4° to 85° C with +/-0.02° C stability. A climate controlled room at or below 23° C required to meet these specifications, for temperatures below the dew point a dry air source is required.
- On-line temperature measurement in the sample chamber
- Laser: fiber coupled diode laser at 685 nm, 45 mW, coherence lengths > 5 m
- Laser safety measures reduces setup to laser class 1.
- Two high sensitivity APD detectors of the NanoLab 3D allow measurements on samples with weak scattering: quantum efficiency 65% at 685 nm, dark count < 250 count/s
- Single mode fiber detection system with integrated collimation optics
- Two channel multiple tau correlator: auto and cross correlation, 12.5 ns minimum sample time
- Laser attenuation system combined with on-line incident laser intensity measurement. Laser intensity can be recorded by the software for later normalization.
- The NanoLab 3D conforms to ISO 22412.
- PC and flat screen (22”) with preinstalled software
- The standard software includes cumulant and CONTIN analysis for particle sizing. Updates of the standard software will be provided free of charge during the first year after the purchase of the instrument.
- Detailed manual
- The NanoLab 3D is a precision optical instrument that requires a laboratory environment for optimum operation. No more than 60% relative humidity, temperature range 17°-26°C.



* As for all DLS instruments, the maximum range is sample dependent.

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