VASCO KIN

In Situ & Real Time/Time Resolved Nanoparticle Size Measurements

The most versatile and flexible DLS instrument for fast and accurate nanoparticle size measurements, kinetic and process monitoring

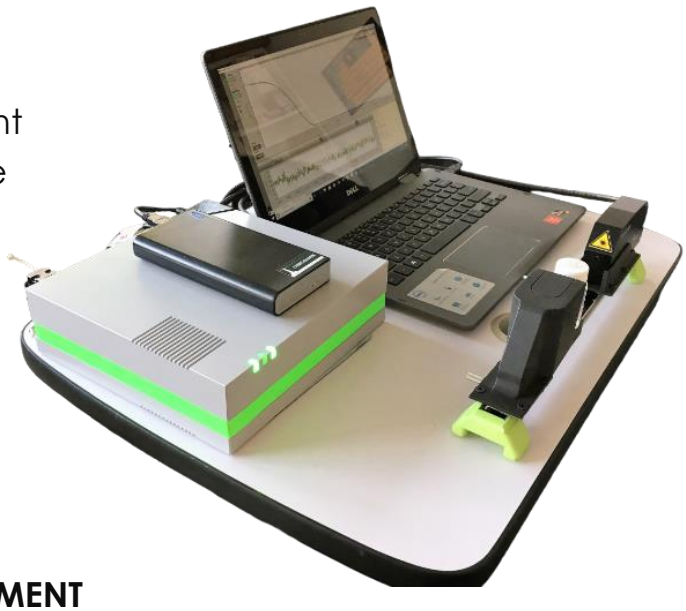
IDEAL FOR

- **Real Time nanoparticle synthesis** process monitoring, suspension stability, etc
- ***In situ* contactless measurements** (inside reactor, autoclave, hermetic vial, etc)
- **Coupling** particle size measurements with other instruments (SAXS SANS, RAMAN, UV/Vis, etc),

CORDOUAN Technologies

The most compact & robust analyzer

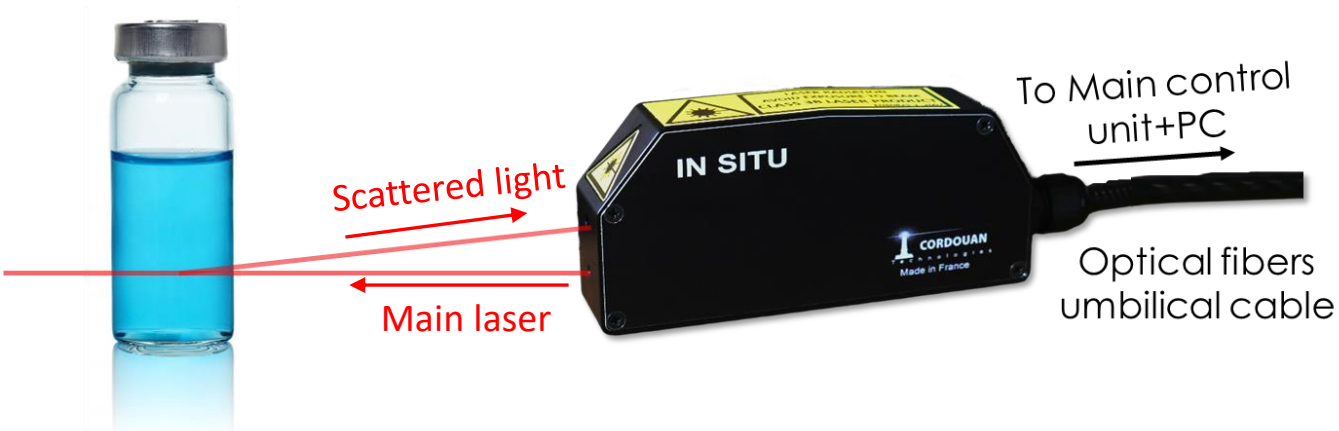
COMPACT & ERGONOMIC DESIGN



- Lightweight (< 5 kg) and small footprint
  - Lab space saving, transportable
- No warmup
  - Turn key operation
- No moving parts
  - Reliable, no maintenance
- OEM integration
  - Easy to handle & to install
- Low power consumption (<15W)

UNIQUE CONTACTLESS *IN SITU* MEASUREMENT

- *In situ* and contactless measurements: no need to batch, no risk of contamination, time and cost saving
- Compatible with any types of transparent containers
- Small foot print: easy integration in space limited environments
- Passive opto-mechanical assembly: highly robust, work in harsh environments (ATEX, glove box)
- Single mode optical fiber umbilical: remote distance from 2m (standard) up to 25m (upon request)



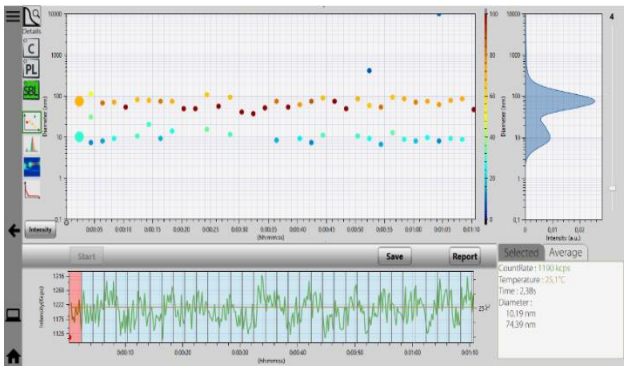
INTERCHANGEABLE OPTICAL REMOTE HEADS

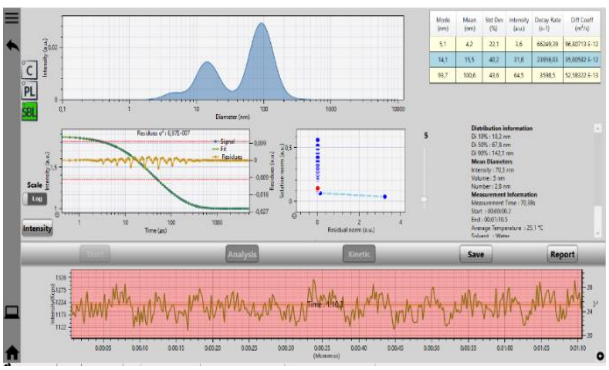
- Different head options matching your applications: see dedicated brochure

NanoKin Software

- Unlimited number of licenses : install the software on all your computers
- Continuous and free updates : no annual license fees

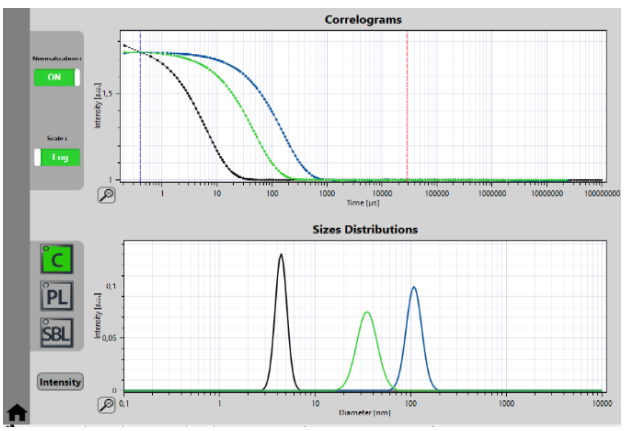
- Unique data analysis functionalities :
  - User defined Time Resolved analysis
  - Spurious intensity events filtering
  - Time slicing and kinetic analysis
  - Customizable report
  - Advanced algorithms (Cumulants, SBL) for simple and complex samples analysis





- Easy access to all measurement data (intensity, correlogram, fit/residues, size distribution, cumulated size, etc.) on one screen
- Data and graph export in one click also in text format for easy handling

- Data comparison tool : compare your sample analysis in a click
- Grab function for on the fly analysis : track your kinetic instantly
- Real Time analysis : get the first results within 10 sec (depending on the sample)



Specifications & main characteristics

OPTICAL HEAD SPECIFICATIONS	
Measurement principle	Optical Fiber Dynamic Light Scattering (DLS)
Min. Sample Volume (µL)	<50 µL (cell dependant)
Sample Cells	*In situ* – Contactless remote head
Solvent compatibility	Aqueous & Organic solvents (cell dependent)
Scattering Angle (°)	170°
Particle size range	0.5 nm – 10 µm (sample dependent)
Sample concentration range	10^{-5} % to 5~10% volume (sample dependant)
Molecular weight range (SLS)	0.9 kDa – 20 MDa ±5%
Weight	< 0,5 kg
Dimensions	120 x 25 x 50 mm3 (L×W×H) – Umbilical cable: 2m standard (contact us for other lengths)
HARDWARE SPECIFICATIONS (central unit)	
Laser source	635 nm -50 mW - High stability laser diode (option: wavelength customization on request)
Detector	Artefactfree Avalanche Photodiode (APD)
Computing	Embedded dedicated PC
Data processing	Correlation and analysis software: NanoKin®
Typical measurement time	Starting from 200 ms depending on sample and measurement settings
Operating conditions / Storage conditions	15°C to 40°C / -10°C to 50°C – Relative humidity < 70% non condensing
Weight	2,5 kg
Dimensions	220 x 220 x 64 mm^3 (L×W×H)
SYSTEM COMPLIANCE	
CE certification	CE marked product – Class 3b laser product – EN-60825-1: 2001, CDRH
Normalization	ISO 13321 (1996) & ISO 22412 (2008) compliant, CFR 21 part 11 (option)
ACCESSORIES & SERVICES	
	2 years warranty, installation and training, online support
	NanoKin® software & instruction manual
	Pelicase™ transportation case (option)
	NIST Certified latex suspension kit (option)
	PC, keyboard, mouse (option)

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