# In Line Milli-fluidic remote DLS probe

For real time Nano-Particle size monitoring



### Easy coupling with other setups:

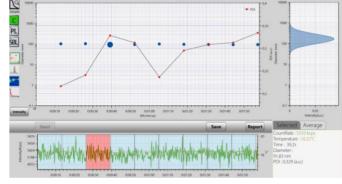
- ✓ Microfluidic chip
- ✓ A4F, SEC, HPLC Chromatography
- ✓ Nanoparticle synthesis chip
- ✓ Spectroscopy (UV/VIS, Fluo, Mass etc.)
- ✓ Recirculation system

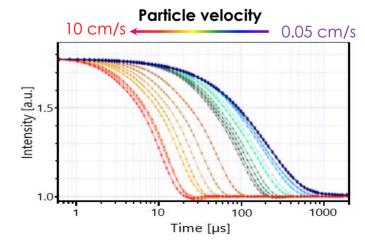
### Real Time process control:

- ✓ LNP synthesis/production bench
- ✓ CMP Slurries in-line quality control
- ✓ NP Sample formulation

#### **IDEAL FOR**

- In-line measurements
- Size distribution of your formulation at the outlet of your microfluidic chip
- Real-time control of your formulation at various flow rates

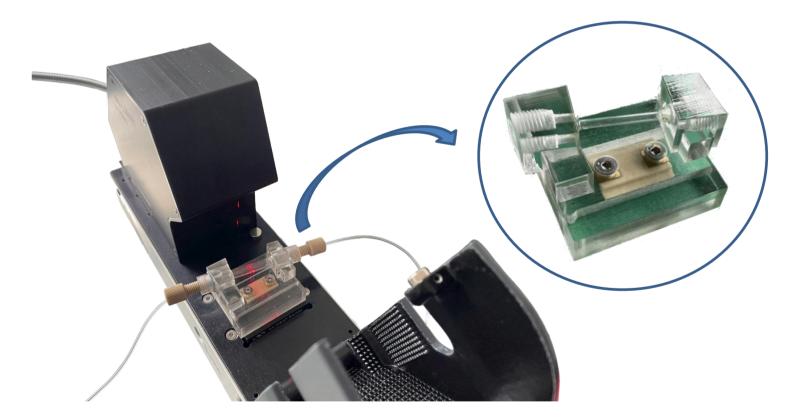




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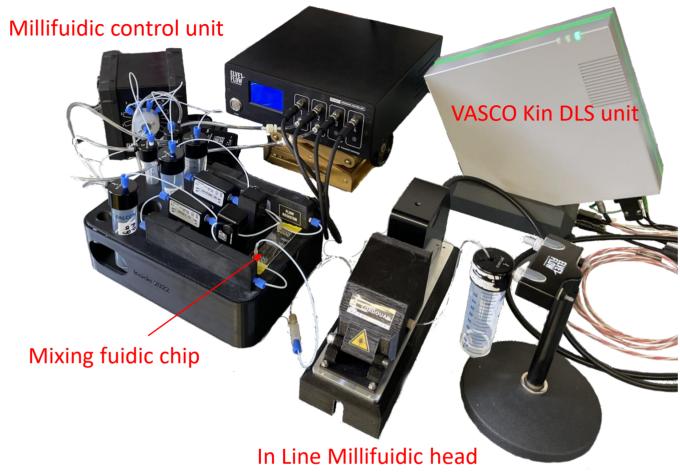
## Main characteristics & uses

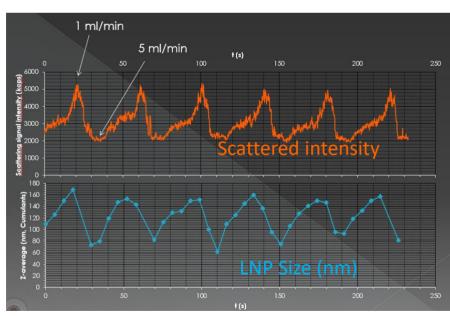
- Interchangeable glass millifluidic channels
  - Plug and play module (no alignment required)
  - Internal channel diameter fitted to your application (0,5-200 mm)
  - Possibility to couple with microfluidic chip
  - Easy implementation in process line; compatible with standard tubing
  - ☐ No sample batching required: integrity and sterility preserved
- Easy to include in various experiments/applications
  - ☐ For industrial processes: process monitoring (ex: Slurries, LNP production)
  - ☐ For research purposes: coupling to analytic tools (A4F, SEC, fluidic chip, etc)
  - ☐ Optical fiber connection: compatible with **VASCO Kin** and **AMERIGO** devices



Innovative removable capillary holder concept for easy cleaning, replacement and maintenance

# Example of use: In line & real time monitoring of Lipidic Nano Particle production





Scattered intensity & LNP size evolution over time for two different fluidic flow rate

## **SPECIFICATIONS**

OPTICAL HEAD SPECIFICATIONS	
Measurement principle	Optical Fiber Dynamic Light Scattering (DLS)
Particle size range	0.5 nm – 10 µm (sample dependent)
Sample concentration range	$10^{-5}\%$ to $5\sim10\%$ volume (sample dependent)
Scattering Angle (°)	130° *
Dimensions / Weight	145 x 85 x 265 mm (HWD) / < 1,0 kg

FLUIDIC SYSTEM SPECIFICATIONS	
Sample Cells	Millifluidic glass channels of various diameters (500 µm – 30 mm) (optionally customizable)
Min. sample volume	<50 µL (channel dependent)
Solvent compatibility	Aqueous & Organic solvents (channel dependent)
Sample flow rate range	0,01-20,0 ml/min (sample and capillary- diameter dependent)
Options	Dilution & recirculation system



Distributor details

## Contact: sales@cordouan-tech.com

11, avenue de Canteranne 33600 Pessac – France Tel +33 (0)556 158 045 Fax +33 (0)547 747 491



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