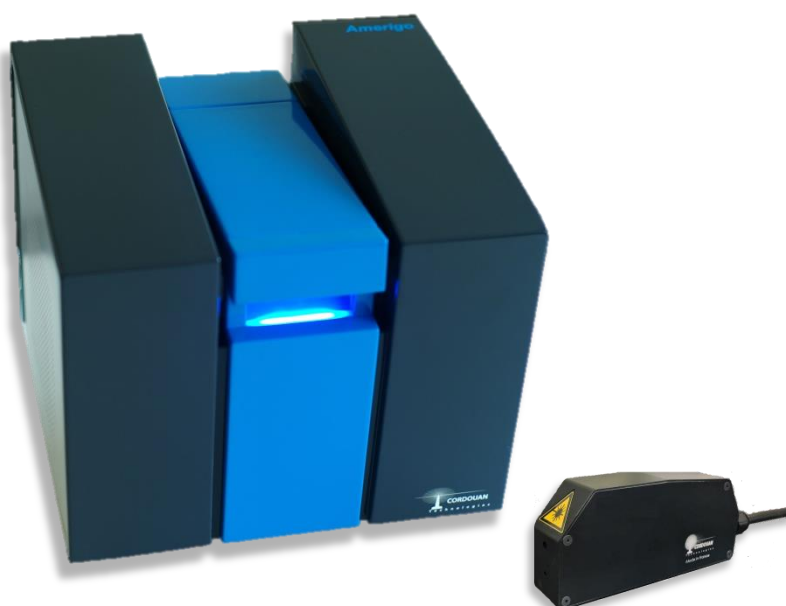


High resolution nanoparticle size & zeta potential measurements



*Explore your nanoparticle suspensions
with one instrument!*

Unique: optical fiber output for an external
in situ contactless probe

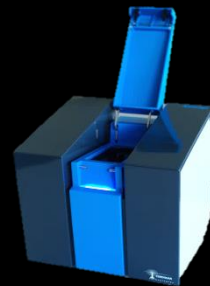
IDEAL FOR

Formulation stability
Nanoparticle aggregation
Emulsions dispersion
Pharmaceuticals
Petrochemicals
Polymers
Liposomes and bio-colloids
Pigments and inks
... and more



Enlight the nanoworld

AMERIGO^U



Particle size & Zeta potential analyzer

SPECIFICATIONS

| | |
|---|--|
| Particle size range | Particle size : 0.5 nm up to 10 µm Zeta potential : 1 nm to 100µm |
| Sample concentration | 0.0001% to 10% w/% (solvent dependent) |
| Zeta potential range | -500 mV to +500 mV |
| Temperature control range inside the cell | 10°C to 70°C; +/-0,1°C (depending on cuvette cell material) |
| Mobility range | 10 ⁻¹⁰ to 10 ⁻⁷ m ² /V.s |
| Sample cell | Cuvette cell with optical quality windows compatible with organic solvents |
| Sample volume | Typically 750 µL (Hellma cell: 10 mm light path) |
| Sample type | Aqueous & organic solvents; pH: 1-14 (depending on cuvette cell material) |
| Maximum sample conductivity | 300 mS/cm |
| Optical fiber output (optional) | Possibility to connect an external <i>in situ</i> head or DTC head |



SIGNAL PROCESSING

| | |
|---------------------------|--|
| Measurement technology | Dynamic Light Scattering (DLS) Laser Doppler Electrophoresis (LDE) |
| Laser source | Highly reliable 50 mW diode @635 nm coupled to automated optical attenuation system. Other wavelengths available upon request. |
| Measurement angles | Particle size : 170° (backscattering) and 17° Zeta potential: 17° |
| Data processing algorithm | Real time correlation Fast Fourier Transform |
| Resolution | Mobility = 10 ⁻¹⁰ m ² /V.s or Zeta = 0,1 mV (in water) |
| Detector | Avalanche Photodiode (APD) |

HARDWARE

| | |
|--------------------|--|
| Computer interface | USB 2.0 – Windows 10 32 & 64 bits |
| Dimensions | 33 cm x 33 cm x 38 cm (HWD) |
| Weight | 17 kg |
| Power supply | 100-115/220-240 VAC, 50/60 Hz, 100 W max |

SYSTEM COMPLIANCE

| | |
|------------------|---|
| CE certification | CE marked product - Class I laser product, EN 60825-1:2001, CDRH |
| ISO norm | ISO 13321 (1996) & ISO 22412 (2008) compliant, CFR 21 part 11 (option) ISO 13099-2 : 2012 – Colloidal system – methods for zeta-potential determination – Part 2 : Optical methods |



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|--------|--------------------------------------|-------------------|--------------------|--------------------|-------------|
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