

Want to **see** your **nano** **particles** in the **dark**



VASCO

*particle size analyzer
a new light in your lab*



Nano to Micro

With an original and ergonomic product design, VASCO is a portable instrument dedicated to lab and field applications.

VASCO

Nano to Micro Particle Size Measurements in Dark and Concentrated Suspensions



Download the VIDEO at
www.cordouan-tech.com



Based on a patented innovative technology developed in collaboration with the French Institute of Petroleum (IFP), the VASCO particle size analyzer is a unique instrument for nano to micro particle size measurements in suspensions. The measurement principle is based on Dynamic Light Scattering (DLS) of back-scattered light.

CORDOUAN TECHNOLOGIES offers an original optical configuration that combines back-scattered light detection and the capability to control the sample thickness. Compared to conventional analyzers, this configuration avoids multiple scattering and allows accurate measurements even in **concentrated** and **dark** dispersions. Moreover, in most cases **no sample dilution** is necessary which makes measurements almost instantaneous.

The granulometer VASCO can also perform **on-line measurements** of concentrated samples and provides real-time analysis of particle size in a pipeline or a reactor without stop flow.



particle size analyzer

0.5 nm up to 6 μm

Concentration range up to 40%

Small sample volume (50 μL)



Patented innovative technology

No consumable part

Easy cleaning procedure

ISO 13321 / 21CFR part 11

Intuitive software nanoQ[®]

Size distribution display



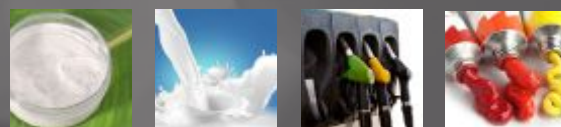
Applications

- **Food Industry** : milk, chocolate, coffee, beer, emulsions...
- **Pharmaceutical** : suspensions, powders, syrups, injectables, microcapsules...
- **Chemicals** : polymers, dispersants, pesticides
- **Environmental** : tap water, waste water, flocculation, membrane filtration...
- **Cosmetic** : perfumes, creams, emulsions...
- **Petrochemical** : fuel, crude oils, bitumen additives...
- **Pigments** : inks, toners, paints, varnishes...

On-line measurement option

Kinetic of aggregation

Portable instrument (<12 kg)



VASCO



particle size analyzer

PRODUCT SPECIFICATIONS:

Description

Particle size range (nm)

Sample concentration range (% volume)⁽¹⁾

Photon counting unit

Sample setting temperature

Laser diode characteristics

Applications

On-line measurement option

VASCO-1

10 to 6000

0.01% to 40%

PMT⁽²⁾

Fixed at 20 °C

Temperature stabilized

658 nm/15 mW

option : 532 nm/30 mW

Ink, bitumen, metallic

oxide dispersions,

emulsions, etc...

No

VASCO-2

2 to 6000

0.001% to 40%

PMT⁽²⁾

+ 15 to + 90 °C

Temperature stabilized

658 nm/65 mW

option : 532 nm/30 mW

Ink, polymers, metallic

oxide nanoparticles,

emulsions, etc...

Yes

VASCO-3

0.5 to 6000

0.0001% to 40%

APD⁽³⁾

+ 15 to + 90 °C

Temperature stabilized

658 nm/65 mW

option : 532 nm/30 mW

Ink, polymers, metallic

oxide nanoparticles,

micellar dispersions, etc...

Yes

General characteristics

Reproducibility / Repeatability

Analysis Software

Measurement time (typical)

Sample volume

Ambient temperature

Warm up time (cold start)

Solvent⁽⁴⁾

Dimensions (HxWxD)

Power supply

Power consumption

Instrument configuration

Operating System

Normalisation

Laser safety classification

Computer configuration⁽⁵⁾

Accessories

Computer Interface

Better than 5%

nanoQ® performs multi-acquisitions, size distribution simulation, kinetic size of aggregation monitoring, features Cumulants, Contin and unique **Padé-Laplace** inversion algorithms.

30 sec to 5 min depending on sample and measurement settings (programmable)

< 50 µL

+15 to +30 °C

< 5 min

Aqueous and organic solvents

30 x 33 x 28 cm

110/220 V in standard

< 50 W

Bench top (< 12 Kg)

Windows 2000, XP, Vista, 7

CE marked product, CFR 21 part 11, ISO 13321 compliant

Class I compliant EN 60825-1/A2

Pentium III or equivalent, RAM 512 Mo

Power supply and USB cable, nanoQ® installation CD ROM,

Pellicase™ transport case

USB 2

(1): maximum concentration value is limited by particle interactions

(2): photomultiplier tube (3): avalanche photodiode (4): solvent proof cell

(5): minimal expected configuration for optimal operation



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