

ZetaCAD®



An electrolyte is to move through a capillary or porous plug by a pressure gradient. The excess charges around the particles or wall are carried along by the liquid.

Their accumulation down stream causes the build-up of an electric field which drives an electric current back (by ionic conduction through the liquid) against the direction of the liquid flow.

A steady state is quickly established and the measured potential across the capillary is called the streaming potential.

Parameters Measured

- Streaming Potential
- Electrical-Conductivity
- Temperature

Features and Benefits

- Applicable to particles above 50 μm diameter and flat surfaces.
- Reliable and simple to setup. Measurement and rinsing of the system are fully automated.
- Menu driven software Windows based.
- Data acquisition creates ASCII files directly compatible with usual spreadsheet.

ZetaCAD®

**Zeta Potential analyser
By streaming potential
Determination using the
Porous plug technique**

CAD Instrumentation

CAD Instrumentation offers wide range of services to help you take advantage of this new measurement device. ZetaCAD can be used for major industrial and academic application including:

• Ceramics • Fibre and Textile	• Water treatment • Papermaking	• Polymers • Geology
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ZetaCAD® Specifications

Technology

Zeta Potential analyser by streaming potential determination using the porous plug technique

Characteristics

Conductivity meter	0 – 20mS/cm
Communications	RS232C bi-directional interface. Digital I/O board
Power supply	100V to 240V – 50 to 60Hz – 50 VA
Dimensions	W 600mm x D 600mm x H 600mm
Weight	40kg

Measuring Cell

Standard cell diameter	15 mm, Other upon request
Variable cell dimension	from 10 to 150 mm Length
Tangential cell	Surface specimen chamber: Ø40 x L80 x I20mm
Flow through cell	Ø 47mm Variable thickness

Specifications

• Differential pressure range	up to 500 mBar
• Voltage accuracy	0.1 µV

Minimum Computer Specification (if supplied by customer)

- Pentium III class, 128 Mb RAM, Windows 98, 2000, Millennium, XP

*Note: These specifications may change in the interest of product development
The ZetaCAD was designed in cooperation with University of NANCY. FRANCE*



Instrumentation