ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Matec ESA 9800* at our website: ***Click HERE***

Matec Applied Sciences

Matec Applied Sciences
About MAS
Products
Applications
Contact Us
Locate Us

Matec Applied Sciences
56 Hudson St.
Northborough, MA
01532 USA
508-393-0155
colloid@matec.com

ESA-9800: Zeta Potential Analysis Without Sample Dilution



Using a patented method called Electrokinetic Sonic Amplitude, the ESA-9800 System achieves remarkable electrokinetic measurement results while eliminating the severe limitations and restrictions of the traditional microelectrophoresis technique. With ESA, particle mobility and Zeta Potential can be measured simultaneously with pH, conductivity, and temperature. Samples can even be titrated during the measurement. The ESA-9800 enables you to measure aqueous and non-aqueous dispersions in the concentration range of 0.5% to over 40% by volume of the dispersed phase. Systems of particles up to 50 microns in size can be measured without difficulty. Samples can even be vigorously stirred or mixed so particle settling is never a problem. No optical alignment is required. The high frequency electric field is only applied in extremely short pulses, so there is never any worry about the sample being affected by the measurement.

In short, you can take real measurements on real samples.

Perform Zeta Potential measurements automatically, in minutes instead of hours

The ESA-9800 measures the electrokinetic properties of a particle by an electroacoustic method. A high frequency electric field is applied to the dispersion and the particles move electrophoretically in the applied field. If there is a density difference between the particle and the liquid, this motion will generate an alternating acoustic wave. The application of the electric field and the resulting acoustic wave provides a truly non-intrusive measurement and does not alter the properties of the sample.
Microelectrophoresis and electrophoretic light scattering methods, however, require extensively diluted samples, often several orders of magnitude lower than the original concentration. This requires users to characterize their particles in an artificial state and the results obtained will not be a true measure of the properties of the actual sample. Critical optical alignment and extensive adjustments to locate the stationary layers make microelectrophresis tedious while the large applied DC electric fields may lead to pH drifts in the sample. With ESA-9800, these problems do not exist.

Operation of the ESA-9800 is simple. Its computer-controlled, fully-automated measurement process does not require a special sample cell and samples can be taken from anywhere in the manufacturing process or experiment, providing you with meaningful data directly and in real time.

Features

- **High-viscosity samples; concentrations up to 50 volume %**
- **Aqueous and non-aqueous colloidal systems**
- **Hand-held gold and stainless steel sensing probe for accuracy, repeatability, and ease of use**
- **Minimum volume 10ml, no maximum**
- **Effective with particles down to molecules, up to 30 microns**
- **Ideal for concentrated and/or opaque samples**
- **No special vibration-free requirements**
- **Simultaneous pH, conductivity, temperature, and electrokinetic signal measurement**
- **Measurements on flowing, stirred, or still dispersions**
- **Windows-based software with powerful data management**
- **DSP-based hardware**
- **On-line, real-time measurements and on-screen plotting**
- **Easily cleaned, disposable, teflon titration chamber**
- **On-site installation and training**
- **12-month limited warranty with free consultation**

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP