Zeta Potential Analyzer - Nanoparticle Size Analyzer - 0.3-10000 nm - ±500 mV

Model **MSPSA-LS901SWISS** | Brand **Master Science**





The Master Science Zeta Potential Analyzer combines dynamic light scattering particle sizing and electrophoretic zeta potential measurement in a single compact instrument. It sizes nanoemulsions, colloids and suspensions from 0.3 nm to 10 µm and reports surface charge from -500 to +500 mV.

KEY HIGHLIGHTS

- Size and charge in one bench
- Clean photon signal
- Temperature-stable data
- Robust optics
- Fast answers

AT A GLANCE

-500 to +500 mV ZETA POTENTIAL RANGE	**0.3 to 10,000 nm (sample dependent)** SIZE RANGE
0.1 to 100 mg/mL (sample dependent) CONCENTRATION RANGE	**< 15 % (standard sample)** ZETA ACCURACY / REPEATABILITY

Request a Quotation
Contact us for pricing, configuration options and delivery details.

support@themsci.com
www.themsci.com

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Overview

A high-speed digital correlator, sensitive photomultiplier detection and Peltier temperature control to ±0.1 °C give stable, repeatable data for formulation development and production QC.

Key Benefits

Size and charge in one bench
the Master Science Zeta Potential Analyzer measures both stability indicators without moving the sample to another instrument.

Clean photon signal
photomultiplier tubes give high sensitivity and signal-to-noise for weak scatterers.

Temperature-stable data
±0.1 °C control prevents viscosity and Brownian motion errors.

Robust optics
fibre coupling and optical frequency shifting resist interference.

Fast answers
results are ready in under five minutes.

For larger particles up to 3500 µm, see the Master Science laser particle size analyzer.

Technical Specifications

GENERAL

Brand	Master Science
Model Number	MSPSA-LS901SWISS
SKU	MSPSA-LS901SWISS
Zeta Potential Range	**-500 to +500 mV**
Concentration Range	**0.1 to 100 mg/mL (sample dependent)**
Electrophoretic Mobility	> ±20 µm·cm/(V·s)
Maximum Conductivity	200 mS/cm (sample dependent)
Zeta Accuracy / Repeatability	**< 15 % (standard sample)**
Laser	Semiconductor, 635 nm, 1 to 40 mW adjustable
Scattering Angles	90° (size); 18° (zeta)
Sample Cells	10 × 10 × 40 mm, 1 to 4 mL (size); 10 × 10 × 60 mm, 1 mL (zeta)
Temperature Range	**5 to 90 °C**
Temperature Accuracy	**±0.1 °C**
Test Time	< 5 min
Correlator	892 autocorrelation channels; 1 µs to 10 ms delay
Detector	Photomultiplier tube
Formulations separating on storage	zeta potential predicts dispersion stability early.

DIMENSIONS & WEIGHT

Size Range	**0.3 to 10,000 nm (sample dependent)**
Size Accuracy / Repeatability	**< 1 % (standard sample D50)**
Dimensions	600 × 420 × 210 mm
Net Weight	28 kg
Temperature-driven size errors	precise Peltier control keeps conditions constant.
Two instruments for size and charge	one unit measures both.

COMMON LABORATORY PROBLEMS AND HOW THIS ANALYZER HELPS

Common Laboratory Problems and How This Analyzer Helps	How the Master Science Zeta Potential Analyzer helps with nanoparticle characterisation:
Weak signals from small particles	PMT detection improves sensitivity.
Long test times	results are available within minutes.

Applications

The Master Science Zeta Potential Analyzer is used for
Nanomaterial research and fine chemicals Emulsions and pharmaceutical formulations Surfactants, polymers and oligomers Inks, pigments and coatings Colloid stability studies in universities

Measurement

- Dynamic light scattering particle sizing
- Electrophoretic light scattering for zeta potential
- High-speed digital correlator

Detection and Optics

- Photomultiplier detection
- Fibre-coupled optical path
- Optical frequency shifting

Sample Handling

- Peltier temperature control 5 to 90 °C
- Separate cells for size and zeta
- Small sample volumes from 1 mL