

ZETASIZER

RECENTLY ADDED IN THE

CENTRAL HI-TECH LABORATORY
University of Agriculture, Faisalabad



Introduction:

Light-scattering instrument for characterizing particles in liquid dispersions. Measures particle size, zeta potential, electrophoretic mobility, molecular mass and transmittance.

Particle size, zeta potential, and molecular mass are determined by measuring dynamic light scattering (DLS), electrophoretic light scattering (ELS), and static light scattering (SLS), while the transmittance is determined by using light transmission. The Litesizer™ 500 offers the full suite of measurements and has three detection angles available, automates the adjustment of the sample's pH directly in the measurement cuvette, enabling the user to perform pH ramps in a simple and accurate manner.

Particle Sizer:

- Measurement angles: three angles (15, 90, 175)
- Measurement angle selection: auto and manual
- Size Range: 0.3 nm - 10 µm (diameter)
- Min. sample volume: 3 - 12 µL
- Sensitivity: 0.1 mg/mL to 1 mg/mL
- Accuracy & Repeatability: Better than $\pm 2\%$

Zeta Potential:

- Zeta Potential Range: $> \pm 1000$ mV
- Measuring Angle : 15
- Minimum sample Volume: 50 µL
- Conductivity Accuracy: $\pm 10\%$
- Repeatability: $\pm 3\%$
- Size range: 3.8 nm - 100 µm (diameter)

Molecular Mass:

- Measuring range (particle size): up to 50 nm (diameter)
- Measuring range (mass): 980 Da - 20 MDa
- Measurement angle: 90°
- Repeatability: $\pm 5\%$
- Accuracy: $\pm 10\%$

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Training Proforma: <http://oric.uaf.edu.pk/files/updates/Training%20Proforma.pdf>



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