

ZETA SIZER -3901

Zeta Potential Analyzer



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Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

ZETA Sizer 3901 and Potential Analyzer is a new high-end dynamic light scattering particle size analyzer product launched by Analytical Technologies Limited; which has dual testing capabilities of zeta potential and nano-particle size.

ZETA Sizer 3901 uses electrophoretic light scattering technology to measure zeta potential and obtain isoelectric point, and uses static light Scattering (SLS) techniques measure molecular weight.

Compared with other instruments of the same type at home and abroad, it has significant advantages , and can be used in various experiments in conjunction with the laser particle size distribution analyzer.

Advantages :

Test principle

Using the principle of electrophoretic light scattering and photon correlation spectroscopy, the size of particle Zeta potential was determined according to the electrophoretic movement speed of particles in liquid. The population velocity of the electrophoretic motion of the particles, and the amount of Doppler shift of the scattered light caused by the laser irradiation of these particles, varies. Photon correlation spectroscopy analyzes the size of particle Zeta potential according to the frequency shift.

Ultra-high-speed data acquisition

The core component of the instrument is through the HA1024 digital correlator, which can complete the collection of electrophoretic scattered light intensity and the calculation of the auto-correlation function in real time, so as to effectively reflect the information of the electrophoretic movement speed of the particles and lay the foundation for the accuracy of the Zeta potential test result.

High sensitivity signal-to-noise ratio

Using professional-grade high-performance photomultiplier tubes, it has extremely high sensitivity and signal-to-noise ratio to photon signals.

High speed data collection and calculation

Using semiconductor temperature control technology, the temperature control accuracy is as high as 0.1 C, so that the sample is always in a constant temperature

state during the whole test process, avoiding the test deviation caused by the change of liquid viscosity and Brownian motion caused by temperature changes, and ensuring the accuracy and stability of the test results

Stable optical path system

The optical path system constructed by the optical frequency gifting device and the optical fiber coupling technology makes the detection system not only small in size, but also has strong anti-interference ability, thus ensuring the stability of the test.

Application :

ZETA Sizer 3901 and Potential Analyzer has both zeta potential and nano particle size analysis and testing functions. It is suitable for particle size and surface potential measurement of a variety of different nanoemulsions, suspension colloids, etc. It can be widely used in fine chemical industry nanomaterials, R&D and production quality control of surfactants, oligomers, etc. It is also a product development and quality control testing instrument for inks, pharmaceutical preparations and other industries.

Technical Specification :

Executive standard	GB/T 19627-2005/ISO 13321 : 1996 ; GB/T 29022-2012/ISO 22412 : 2008		
Function	Size, Zeta potential, Molecular weight		
Measure range	1-10000nm (reference to sample)	-500mV — +500mV	
Concentration range	0.1mg/ml--100mg/ml (reference to sample)		
Electrophoretic mobility range	> $\pm 20\mu\text{m.cm/V.s}$		
Highest conductivity	200mS/cm (reference to sample)		
Accuracy error	<1% (National standard sample D50 value) <10% (Standard sample)		
Repeatability error	<1% (National standard sample D50 value) <10%(Standard sample)		
Laser Source	Semiconductor laser $\lambda = 635\text{nm}$, P=1-40mw (adjustable)		
Detector	Photomultiplier tube		
Scattering angle	90°	18°	
Sample cell volume	10mm*10mm*40mm, 1--4mL	10mm*10mm*60mm, 1mL	
Temperate range	5-45°C		
Temperature control accuracy	0.1°C		
Test speed	<5 Min		
Digital correlator	Model	HA1024	HA1024
	Auto-correlation channels	892	892
	Baseline channel	4	-
	Physical channels	5000	-
	Unit delay time	1 μs -10ms(adjustable)	1 μs -10ms(adjustable)
Outer dimension	560mm*450mm*300mm		
N.W.	20Kg		

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HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

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Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

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About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies



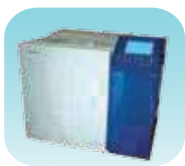
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Counter



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Analyzer



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Fully Automated
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PCR/Gradient PCR/
RTPCR



TOC
Analyzer



Laser Particle
Size Analyzer



Ion Chromatograph



Water purification
system

Regulatory compliances



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