

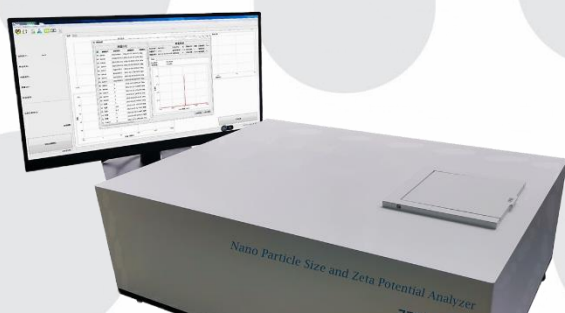


ZETA-901

Particle Size and Zeta Potential Analyzer

Gold APP Instruments China

Lead You to Particle World Better



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INTRODUCTION

ZETA-901 nano particle size and potential analyzer is a new & advanced analyzer uses dynamic light scattering principle for particles determination, it has testing capabilities like zeta potential, nano-particle size, concentration, and molecular weight.

ZETA-901 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 level, it has significant advantages, and can be used in various experiments in conjunction with the laser particle size distribution analyzer.

ZETA-901 particle size and zeta potential analyzer has both zeta potential and nano particle size analysis functions. It is suitable for particle size and surface potential measurement of a variety of different nano emulsions, suspension colloids, etc. It can be widely used in fine chemical industry nanomaterials, research and production quality control of surfactants, oligomers, etc. It is also a good tool for quality control testing for inks, pharmaceutical preparations, and other industries.

It can meet your entry-level testing needs, also be OK for advanced measurement.

FEATURES

● Test Principle

Using the principle of electrophoretic light scattering and photon correlation spectroscopy, the particle size and Zeta potential be 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, 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 results.

● High Sensitivity Signal-to-noise Ratio

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

● High Precision Constant Temperature Control

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 shifting device and the optical fiber coupling technology makes the detection system not only small in size, but also has strong anti-interference ability, thus guarantee the testing stability.

SPECIFICATIONS

Model No.	ZETA-901		
Standards	GB/T 19627-2005/ISO 13321: 1996, GB/T 29022-2012/ISO 22412: 2008		
Functions	testing particle size, zeta potential, molecular weight		
Measure Ranges	1-10000nm (according to material properties)	-500mV to +500mV	
Concentration Range	0.1mg/ml--100mg/ml (according to material properties)		
Electrophoretic Mobility Range	> ±20µm.cm/ V.s		
Highest Conductivity	200mS/cm (according to material properties)		
Accuracy Error	<1% (standard sample D50 value)	<10% (standard sample)	
Repeatability Error	<1% (standard sample D50 value)	<10% (standard sample)	
Laser Source	semiconductor laser λ= 635nm, P=1-40mw (adjustable)		
Detector	photomultiplier tube		
Scattering Angle	90o	18o	
Sample Cell Volume	10mmx10mmx40mm, 1-4 mL	10mmx10mmx60mm, 1mL	
Temperate Range	5-45℃		
Temperature Accuracy	0.1℃		
Testing Speed	<5 Min		
Digital Correlator	Models	HA1024	HA1024
	Auto-correlation Channels	892	892
	Baseline Channel	4	-
	Physical Channels	5000	-
	Unit Delay Time	1µs-10ms (adjustable)	
Dimension	560mm*450mm*300mm, 20 Kgs		

The zeta potential is important for many chemicals like ceramics, electronic and pharmaceutical industries, to determine the stability of their suspensions and emulsions. In general, the higher the magnitude of the potential, the better the stability of the dispersion or emulsion. It is also can be used in other materials such as proteins, liposomes, exosomes, nanoparticles, polymer latexes, micelles, oil emulsions, paints & pigments, pigments, inks and toners, cosmetics formulation, wastewater treatment monitoring, carbon blacks etc.



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Our policy of continuous development may cause the information and specifications contained herein to change without notice or liability.



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