wet dispersion laser particle size analyzer for gel

Wet dispersion laser particle size analyzer is a high-precision, intelligent particle size detection equipment, designed for efficient measurement of particle size distribution in liquid dispersion system.

Wet Dispersion Laser Particle Size Analyzer

Wet dispersion laser particle size analyzer combines modern optics, intelligent automation and innovative algorithm technology, can quickly and accurately analyze the particle size characteristics of various types of suspended particles.

Main Features

1. **Free fitting algorithm:** The use of unconstrained free fitting method, the particle size analysis process is not affected by the preset function, can truly restore the complex morphology of the particle distribution, to enhance the authenticity and objectivity of the data.
2. **Innovative optical system:** Adopting the optical architecture combining convergent light and Fourier transform, breaking through the physical limitation of scattering angle of traditional instruments, and significantly enhancing the detection ability of submicron and nanometer particles.

3. **Integrated Wet Dispersion Module:** The built-in dispersion system integrates stirring, ultrasonic, circulating and draining functions to ensure that the sample is fully dispersed and continuously suspended during the testing process, effectively preventing particles from settling and agglomerating, and ensuring the representativeness of the measurement.
4. **Fully automated intelligent testing:** Software platform with a high degree of automation, the user only need to follow the prompts to add the sample, you can start the automatic test process, all dispersion, circulation, measurement and cleaning steps are completed by the system intelligence, simplify the operation process.
5. **Ultrasonic self-cleaning technology:** Ultrasonic self-cleaning function, effectively reducing the sample window manual disassembly and maintenance frequency, to protect the cleanliness of the test window and the accuracy of the data.

Working Principle

Wet Dispersion Laser Particle Size Analyzer is based on the Mie scattering theory, through the laser irradiation of the particles suspended in the sample liquid, to collect their scattered light signals at different angles. The innovative optical path system captures a wider range of scattering angles and improves the resolution of small particles. The collected light intensity data is processed by an intelligent algorithm, and the true distribution of the particles is analyzed using free-fitting techniques. The whole testing process is completed by the automatic dispersion system and intelligent software, realizing efficient dispersion, circulation and automatic cleaning of samples, ensuring the stability and high repeatability of each measurement.

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Model	**LP602**
Implementation standards	GB/T19077:2016, ISO13320:2020, Q/0100JWN001-2024
Measurement Range	0.1um to 450um
Channel number	40
Accuracy error	⩽ 0.5%
Repeatability error	⩽ 0.5%
Laser light source	Wavelength: 639 nm, output power exceeds 2 mW
Optical Path Alignment	fully automatic alignment system, 0.1um
Operation Mode	software operation or fully automatic mode, switchable
Measurement speed	less than 10 seconds
Dimensions	822x365x495mm
Weight	40kg

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Model	**LP602**
Power Supply	100Vac, 230Vac, 50Hz, 60Hz
The following are dispersion methods:	
Ultrasonication	Frequency: f = 40 kHz, Ultrasonic power: P = 60 W adjustable duration
Stirring Speed	0 to 3000 rpm, adjustable
Circulation	Rated flow rate: 8 L/min, Rated power: P = 10 W
Sample Cell	350 ml capacity, Optional 10 mL micro sample cell