

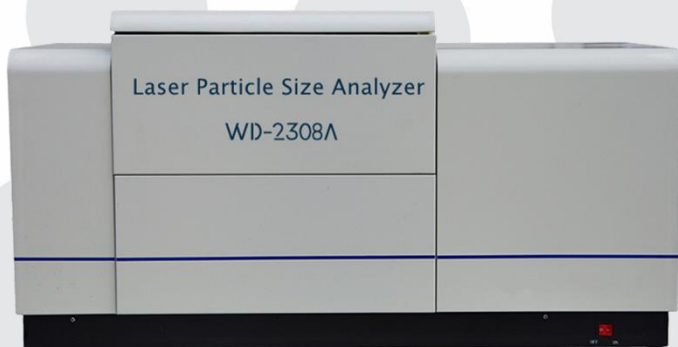


WD-2308A

Particle Size Analyzer

Gold APP Instruments China

Lead You to Particle World Better



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INTRODUCTION

WD-2308A fully automatic particle size analyzer (PSA) adopts laser diffraction theory (Mie and Fraunhofer diffraction), be configured with fully integrated liquid and dry dispersion modules within one instrument, measurable size is from 0.01 μ m to 2000 μ m (dry 0.1 μ m-2000 μ m), which offers reliable and repeatable particle size analysis for a diverse range of applications. Sample dispersion as well as the measurement take place inside the instrument. Such design eliminates the need for operators to handle several accessories, exchange hardware, or make manual adjustments.

It uses dual-beam & multiple spectral detection systems and side light scatter test technology to significantly improve precision and performance of test, It's the prior choice for industrial production quality control departments and research institutions.

FEATURES

- **Compact 2-in-1 design to measure both wet and dry samples**

WD-2308A intelligent laser particle size analyzer which is 1st set laser particle size analyzer integrated wet and dry dispersion testing as one in China, it successfully resolved the problem of dry and wet technology integration, realize one key to switch, apply to test all particles which particle size distribution from 0.01 μ m-2000 μ m.

- **Intelligent fully automatic and manual operation modes can be freely switched**

With intelligent automatic mode of operation, to achieve a key test, click the "test", all process will be completed automatically, not only reduce the testing workload, but also eliminate the interference of human factors, to further improve the accuracy and authenticity of testing results.

Wet method: a key to complete water-supply, ultrasonic dispersion, circulation, testing, cleaning, data record, data analysis, save and print are automatically completed, only take 2 mins.

Dry method: a key to complete the dust collecting, compressed air supply, feeding, testing (the patented technology of turbulence dispersion and the sample window of the negative pressure device make the sample be fully dispersed), data processing and other operation, take 1 min.

- **Stable and unique optical path system**

Converging light Fourier transform path patented technology enables scattering light be not restricted to the lens aperture limit, using the double spectral plane optical path design, the photodetector channels can reach 127 pcs, the maximum detection angle is 145 degrees and the minimum detection angle is 0.0155 degrees. Using dual-laser orthogonal light patented technology, the measurement range is effectively extended to 2000 microns. Canon Fourier lens be used to ensure the stability and accuracy of particle measurement.

- **Automatic optical path alignment system**

With four hybrid stepping motors in the optical components, precision can be 0.1 μ m, ensure the



instrument light path is at its best performance, enhanced the accuracy and stability of test results.

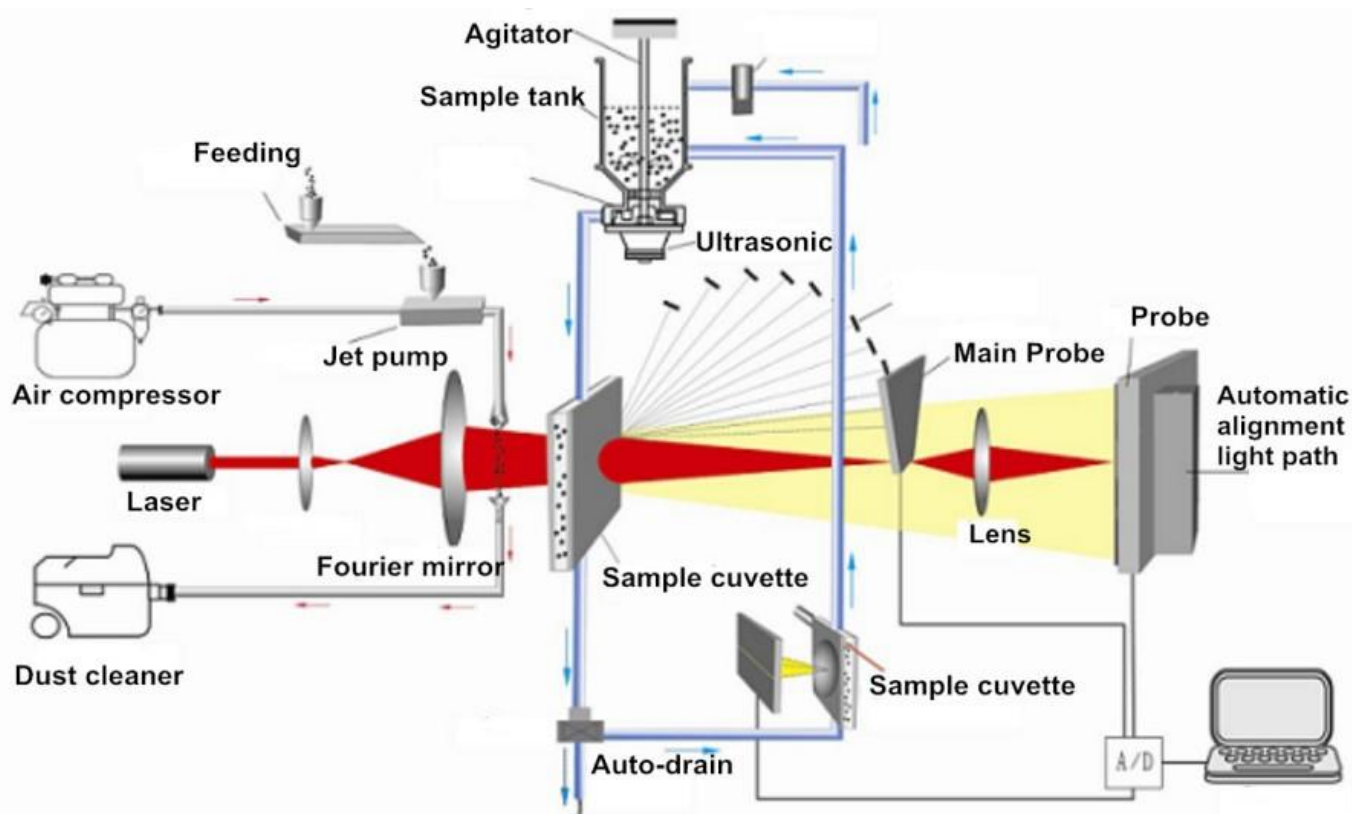
- **Embedded sample wet and dry dispersion system**

Auto wet dispersion system can realize one-key operation, be designed mechanical stirring, ultrasonic dispersion, and circulation path as one. It ensures particles uniform dispersion and distribution, avoids many bad phenomena, such as uneven distribution of particles, large particles deposit because of the long outer dispersing system tube, and it guarantees the meaningful of test result

For dry dispersion system, turbulence dispersion patented technology and normal shock shearing effect make particles sufficient dispersion, can test powders range from 0.1 micron to 2000 micron.

- **Instrument software**

Patented software system can collect scattering data automatically, make particle testing not be restricted by any functions, truly reflect particles size distribution. The instrument provides high precision data with 10 Khz data acquisition time.



Analyzer Working Schematic



SPECIFICATIONS

Model Name		WD-2308A
Standards		ISO13320-1:2009, GB/T19007-2016, Q/0100JWN001-2013 Compliance with 21 CFR Part 11
Principle		laser diffraction principle
Analysis		Mie and Fraunhofer scattering
Detector Arrangement		log-spaced array, test angle from 0.015 degree to 145 degree
Measuring Range		wet:0.01μm-2000 μm, dry: 0.1μm-2000μm
Silicon Photodetectors		wet:127 pcs, dry:100 pcs
Accuracy Error		wet<1%, dry<1% (CRM D50)
Repeatability Error		wet<1%, dry<1% (CRM D50)
Light Sources		high performance semiconductor red laser (λ=639nm) P>3.0MW auxiliary green solid semiconductor laser (λ= 405 nm) P>2.0MW
Optical Path		converging light Fourier transform optical path
Effective Focal Length		500mm
Laser Safety		class 1
Wet Dispersion	Ultrasonic	frequency:40KHz, power:60W, time: ≥1S
	Stir	revolutions speed: 0-3000RPM (adjustable)
	Circulate	rated flow:30L/min, rated power:70W
	Water Level Sensor	prevent water overflow and effectively protect the instrument
	Sample Tank	volume:1000ml
	Micro-Sample Cuvette	volume: 10ml
Dry Dispersion		dry-turbulence dispersion patent technology, normal shock wave shear technique
Feeding Speed		adjustable
Operation Modes		fully automatic / manual control, freely choose
Dispersion Medium		compressed air, pressure: 0 to 6 bar
Optical Bench Alignment System		fully automatic, precision is up to 0.2um
Full Test Speed		wet:<2 Min, dry: <1min, interval time per test result: 500ms
Dimension		L104cm×W44cm×H54cm
Packing Weight		Around 70 kgs



REPORT DATA

Test Range:0.01-2000 μm

Printing Time:2024/3/25 11:49:18

Sample Information

Sample Name:Tracetate

Delivery Co.:

Delivery Date:2024-3-20

Refractive Index:1.57-i*0.010

Testing Information

UltraSonic Time:30s

Measuring Co.:

Dispersed Medium:water

Measuring Man:

Dispersant:

Measuring Time:2024/3/20 11:11:33

Analyse Result (Analyse-Mode:Independent Statistics-Mode: By Volume)

D10=0.125 μm

Dav=0.544 μm

D[3,2]=0.306 μm

D50=0.572 μm

S/V=196300.000 cm^2/cm^3

D[4,3]=0.544 μm

D90=0.951 μm

Fit Error:0.010

Optics Concentration:9.2

Concentration:0.00%

Custom Analyse Result

D85=0.869 μm

D98=1.251 μm

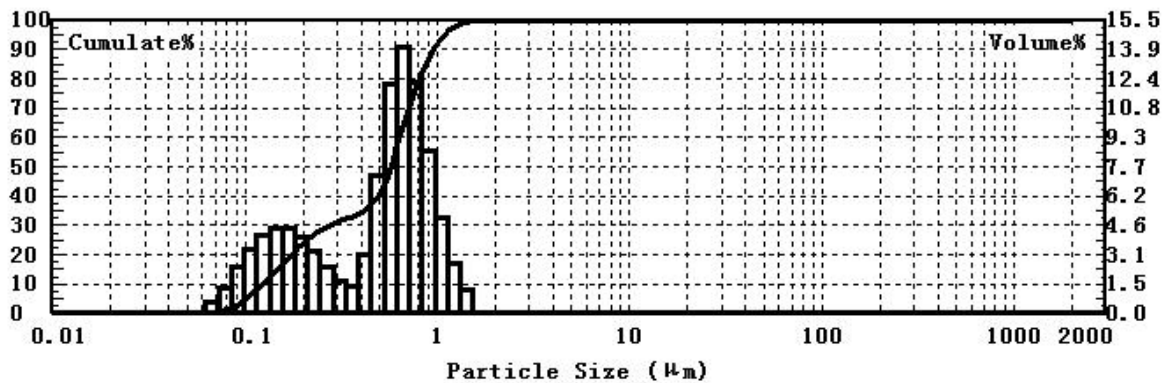
<45 μm :100.000%

<65 μm :100.000%

<80 μm :100.000%

<98 μm :100.000%

<100 μm :100.000%



Size (μm)	Volume%	Cumulate%	Size (μm)	Volume%	Cumulate%	Size (μm)	Volume%	Cumulate%
0.012	0.000	0.000	0.717	14.074	70.283	44.102	0.000	100.000
0.014	0.000	0.000	0.835	12.244	82.527	51.371	0.000	100.000
0.016	0.000	0.000	0.972	8.545	91.072	59.839	0.000	100.000
0.018	0.000	0.000	1.133	5.079	96.151	69.702	0.000	100.000
0.021	0.000	0.000	1.320	2.645	98.795	81.191	0.000	100.000
0.025	0.000	0.000	1.537	1.205	100.000	94.574	0.000	100.000
0.029	0.000	0.000	1.790	0.000	100.000	110.163	0.000	100.000
0.034	0.000	0.000	2.085	0.000	100.000	128.321	0.000	100.000
0.039	0.000	0.000	2.429	0.000	100.000	149.472	0.000	100.000
0.046	0.000	0.000	2.830	0.000	100.000	174.110	0.000	100.000
0.054	0.000	0.000	3.296	0.000	100.000	202.809	0.000	100.000
0.062	0.000	0.000	3.839	0.000	100.000	236.238	0.000	100.000
0.073	0.630	0.630	4.472	0.000	100.000	275.177	0.000	100.000
0.085	1.382	2.012	5.209	0.000	100.000	320.535	0.000	100.000
0.099	2.449	4.461	6.068	0.000	100.000	373.369	0.000	100.000
0.115	3.380	7.841	7.068	0.000	100.000	434.912	0.000	100.000
0.134	4.087	11.928	8.233	0.000	100.000	506.599	0.000	100.000
0.156	4.479	16.407	9.590	0.000	100.000	590.102	0.000	100.000
0.182	4.469	20.875	11.171	0.000	100.000	687.369	0.000	100.000
0.211	4.008	24.883	13.012	0.000	100.000	800.669	0.000	100.000
0.246	3.294	28.177	15.157	0.000	100.000	932.643	0.000	100.000
0.287	2.487	30.664	17.656	0.000	100.000	1086.372	0.000	100.000
0.334	1.719	32.383	20.566	0.000	100.000	1265.439	0.000	100.000
0.389	1.419	33.802	23.956	0.000	100.000	1474.023	0.000	100.000
0.453	3.079	36.880	27.904	0.000	100.000	1716.987	0.000	100.000
0.528	7.250	44.130	32.504	0.000	100.000	2000.000	0.000	100.000
0.615	12.080	56.210	37.861	0.000	100.000			



ACCESSORIES

Items	Unit	Quantity
WD-2308A analyzer	Set	1
Power cable	PCs	2
COM cable	PCs	2
Oil-free air compressor	Set	1
Vacuum cleaner connector	PCs	1
Vacuum cleaner	Set	1
PU tube	Meters	5
Filter	PC	1
Wrench 5.5/7	PC	1
Wrench 8/10	PC	1
Wrench 17/19	PC	1
Sampling spoon	PCs	2
Balloon for clean dry sample tank	PC	1
Cleaning paper	PCs	3
Inner hexagon screwdriver	PC	1
Flathead screwdriver 3*75	PC	1
Flathead screwdriver 6*38	PC	1
Flathead screwdriver 5*75	PC	1
Software CD	PC	1
Quality card	PC	1
Medical silica tube	Meters	1.5
2A fuse	PCs	5
15A fuse	PCs	5
PTFE tape	Box	1
USB transform cable	PCs	2
Silica tube	Meters	1.5
Brush for sample tank	PCs	2
Quartz sample cuvette	PC	1
Sample cuvette brush	PCs	2
Tool bag	PC	1
Standard sample D50= 2.1µm	Bottle	1
Standard sample D50=110µm	Bottle	1
Manual	PC	1
Warranty card	PC	1



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