

Winner-2005B Intelligent Laser Particle Size Analyzer



Overview:

Winner2005B intelligent full automatic laser diffraction particle size analyzer

with principle of Mie Scattering to precisely determine the particle size distribution from $0.1\mu m$ to 1 000 μm . It enables you understand materials well, such as

abrasives, adhesives, agrochemical,barite, Batteries, Bentonite, Boron Carbide, Brucite, Bubble,Ca lcite, Calcium Carbonate, Carbon Black, Catalysts, Cement, Ceramics, Chemicals, Clay, Coal, Coa tings, Corundum, Cosmetics, Diamond Powder, Dolomite, Diatomite,Emulsion, Environmental, Exp losives, Ferrite, Flour, Fluorescent, Fluorite, Food & Beverage, Food Additive,Graphite, Grinding, In ks, Kaolin, Medicine, Metal Powder, Mica, Milling, Minerals,Oxides,Paints, Paper, Petrochemical, P harmaceuticals, Pigments, Plaster, Plastics, Polymers,Quartz,Refractory, Resins, Silica, slurry, Soil Sediments, Starch, Sulfur, Synthetics, Talc, Toners, Tourmaline,Wollastonite, Zeolite, Zirconium Sil icate etc etc. Industry.

Main Specifications:

Model Name		Winner2005B							
Standard		ISO13320-2009, GB/T19077.1-2016, Q/0100JWN001-2013, 21CFR part 11							
Principle		MIE Scattering Principle							
Size range		0.1µm-1000µm							
Photodetectos		87 pcs							
Accuracy error		<1% (Deviation of D50 on national standard sample)							
Repeatability error		<1% (Deviation of D50 on national standard sample)							
Laser		High performance He-Ne Laser λ = 632.8nm, p>2mW Service time>25000 hour							
	Ultrasonic	Frequency:40KHz Power:60W, Time: ≥1S							
Wet	Agitator	Revolutions Speed: 0-3000RPM (Adjustable)							
dispersion	Circulation	Rated Flow:8L/min Rated Power:10W							
	Sample tank	Volume: 450mL							
Operation mode		Manual and Full automatic							
Optical alignment system		Full automatic optical path alignment system							
	Analysis	Free Distribution, R-R Distribution, Logarithm Normal Distribution, Mesh							
	mode	number classification etc.							
	Statistic	Volume Distribution, Quantity Distribution							
	Method								
		Several Testing Results of samples							
	Statistic	Different batches of samples testing result,							
	Comparison	Samples before and after processing,							
		Test result of samples in different time.							
Software		Figure out percentage according to the particle size							
function	User-defined	Figure out particle size according to the percentage							
	Analysis	Figure out percentage according to the particle size range							
		Meet demands of representation of particle test in different industries							
	Test Report	Word, Excel, Photo(Bmp), Text etc							
	Multiple-langu	Multiple language Support							
	age Support	Multiple language Support							
	Intelligent	Automatically control water inflow, dispersion, test and analysis. Better							
	operation	Repeatability after remove human-factor							
Testing speed		<2min/time (including all the procedures) fastest measuring time<10S							
Running temperature		15 °C -35 °C							
Outer dimension		L85cm*W39cm*H45cm							
Net weight		40Kg							



Main Features:

1.Advanced design of light path:

A patented technique of Fourier transform of converging light released the scattered light at large-scattering-angles from the restriction of the aperture of the Fourier lens. The focal length is reduced to enhance the resolution of the instrument, and ring shaped of multi-element silicon photo-diode ensure gathering all the light signals of particles, highly improve the resolution.

2, Built-in intelligent liquid dispersion units:

We carefully aligned the stirring set-up, the ultrasonic dispersing unit and the sample circulation pipes, and fixed them inside the instrument. Such a built-in design effectively prevents the inhomogeneous dispersion and sedimentation of big particles, which can be observed in the designs that these dispersing units are separated from the instruments, where the sample circulation pipes are therefore too long. The sample will be sufficiently dispersed.

3, Unconstrained free fitting analysis patent techniques:

The particle analysis software uses a unique unconstrained data fitting analysis patent technique that we developed to obtain data of real particle size distribution, this is particularly important for researchers.

4, Modern measurement control: (Intelligent SOP Operation)

Users can perform all measurement procedures by simply operating on the PC and have ideal results in a very short time.

6, User-friendly Operation:

manual mode and the automatic mode, freely choose, to measure according to the sample features. In some conditions (e.g. the sample have unknown features or there are special requirements for the measurements), users can make a test measurement in the manual mode first, and after having an idea of the sample features and the measurement conditions, measure the samples in the automatic mode.

7, Three dimension automatic light path alignment system:

A precise four phase hybrid stepping motor automatically aligns the optical path and can adjust it at any moment, precision is up to 0.1um, This releases users from manual adjusting the optical path and improved accuracy and stability of the measurement results.

8, Quick measurements:

set " automatic" mode, all operation procedures are performed automatically, automatic water supply, automatic ultrasonic sample, stirring, circulation, background testing, sample testing, analysis, draining and cleaning, which significantly reduces the time for measurements, the full process < 2 minutes.

9.Data analysis:

Errors in the data are rejected and the measurement results are automatically processed. Manual data processing is not necessary and the output is more standard.

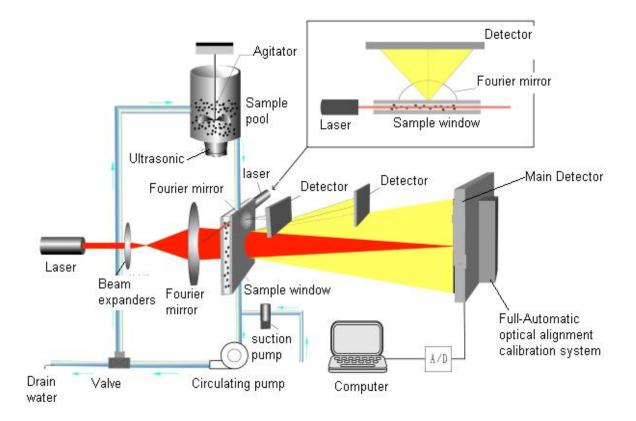
$\operatorname{II}\,$ test analysis view

After testing, if necessary, to select records generated an average result, the system analyzes the formation of the recording. When the automatic mode test, without data processing, forming and maintaining a comprehensive system automatically analyzed test records.

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	Size(Hm)	Volume%	Cunulates	Size(Hm)	Volume%	Cumulate%	Size(Hm)	Volume%	Cunulate#	Size(Hm)	Volume%	Cunulate%
Information	1.100	0.000	0.000	7.354	2.482	17.983	49.179	4.947	84.884	328.878	0.000	100.000
And Canadi Caroli	1.209	0.095	0.095	8.087	2.603	20.586	54.081	4.076	88.960	361.658	0.000	100.000
Sample Information	1.330	0.146 0.222	0.242	8.893 9.779	2.472	23.058 25.349	59.471 65.398	3.051 2.126	92.011 94.137	397.705 437.345	0.000	100.000
	1 608	0.306	0.770	10.754	2.146	27.496	71.917	1.440	95.577	480.936	0.000	100.000
mple Name:粉末-gan 【Average	1.768	0.432	1.202	11.826	2,122	29.617	79.085	1.051	96.627	528,871	0.000	100.000
livery Co.: 海州因斯特	1.945	0.636	1.838	13.005	2.237	31.855	86.967	0.883	97.510	581.584	0.000	100.000
	2.138	0.901	2.739	14.301	2.443	34.297	95.635	0.825	98.335	639.551	0.000	100.000
livery Date:2016-2-18	2.352	1.153	3.892	15.726	2.663	36.960	105.167	0.746	99.081	703.296	0.000	100.000
Testing Information	2.586	1.298	5.190 6.481	17.294 19.017	2.829	39.790 42.694	115.649	0.546 0.373	99.627 100.000	773.395 850.480	0.000	100.000
	3.127	1 148	7.629	20, 913	2.919	45.613	139.852	0.010	100.000	935 248	0.000	100.000
asuring Man:02	3.439	0.931	8.560	22.997	2.930	48.542	153.792	0.000	100.000	1028.466	0.000	100.000
asuring Time: 2016-02-19	3.782	0.705	9.265	25.289	3.052	51.594	169.120	0.000	100.000	1130.974	0.000	100.000
	4.159	0.541	9.805	27.810	3.392	54.986	185.977	0.000	100.000	1243.700	0.000	100.000
09:54:36	4.573	0.502	10.307	30.582	3.959	58.945	204.513	0.000	100.000	1367.661	0.000	100.000
Analyse Result	5.029 5.530	0.644	10.951 11.926	33.630 36.982	4.657 5.266	63.602 68.868	224.897 247.313	0.000	100.000	1503.978 1653.881	0.000	100.000
Analyse Result	6.081	1, 496	13.422	40,668	5.590	74, 458	271.963	0.000	100.000	1818.725	0.000	100.000
0=4, 320 H n 150=24, 096 H n	6.687	2.079	15.501	44.721	5.479	79.937	299.070	0.000	100.000	2000.000	0.000	100.000
0=55.734 Hn Dav=28.252 Hn												
V=5524.876 cm ² /cm ³	1000r											
3.2]=10.860 H m	900											
	800											
4,3]=28.252 H m	700											
oncentration:0.00%	600											
it Error:0.002	500											
	400											
Custon Analyse Result	300											
	100											
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Scheme:





Adopt Patents Technology:

- Optical bench design is protected by patent No.- ZL 2014 2 0378380.8,
- Three dimensional-optical bench alignment system is protected by patent No.- ZL 2013 2 0835882.4.
- MIE scattering principle application patent No.- ZL 2013 2 0812021.4. •
- Dual laser beam orthogonal application is protected by patent No.-ZL 2007 2 0025702.0
- Wet circulation installation is protected by patent No.-ZL2010 2 0593526.2