Winner Particle
Instrument Stock Co., Ltd

WINNER

Winner Particle Size Analyzer Since 1985

THE LEADER OF PARTICLE TESTING TECHNOLOGY IN CHINA

Jinan Winner Particle Instrument Stock Co., Ltd. is a national high-tech enterprise integrating R&D, production and sales of particle testing related instruments and equipment (Securities Name: "Winner Particles", stock code 430410). Leading by technology research and development, Winner has won the National Key New Product Award, the Gold Award of the First China Science and Technology Expo, the Third Prize of Shandong Science and Technology Progress Award, the National High-tech Enterprise and other honorary titles, and has passed CE, SGS,CNAS, ISO9001 international quality system , National Science and Technology SME Innovation Fund Project and other certification acceptance.

The founder of the company, Professor Zhongjing Ren, is a national expert. Since the beginning of the National Seventh Five-Year Science and Technology Project in 1982, Winner invented the 1st particle size analyzer in China, which made up for the lack of domestic particle size analyzers, and developed and produced various particle size analyzers. It has a history of more than 30 years. By now, There are more than 30 national patents, including laser optical path research and development, particle size distribution testing and dispersion invention technology patents, utility model patent technology and self-owned software calculation patent technology, software copyright, etc.
There are more than 10 kinds of products, laser particle size analyzer, nanometer particle size analyzer, spray particle size analyzer, microscopic image particle size analyzer and online particle size analyzer can test the particle size distribution and image morphology of emulsion, suspension, powder, spray of nanometer and micrometer, and are widely used in a variety of product quality control, product research and development of manufacturers in the industry, as well as material research and development applications of the China National Medical Device Inspection Institute and domestic and foreign universities, Its high quality , strong technical support and services to get good feedback from the users, the China Industry's most innovative strength of the enterprise, The honor of China particle testing technology leader, and the top 50 enterprises in Asia etc.

Survive by quality, develop by innovation, adhere to the product concept of excellence and technology-led, Winner strives to provide customers with more accurate, more stable and durable instruments!

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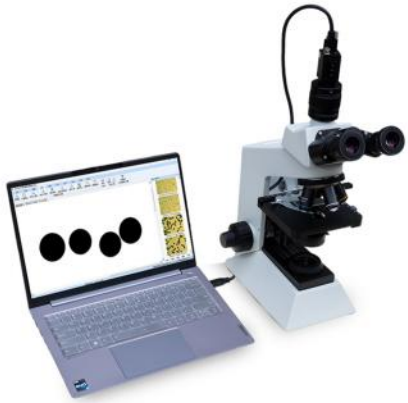
Winner99E

Static Image Particle Size Analyzer

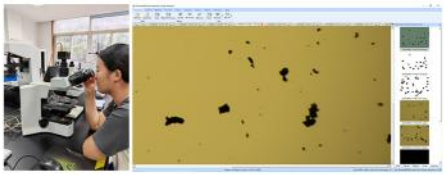


Winner99E is the latest generation of static particle image analysis equipment in China. It uses the latest image acquisition system and analysis software, perfectly combining computer imaging with particle size and shape analysis theory. While obtaining clear particle images, the particle size, sphericity, aspect ratio, bulkiness, surface ratio and other relevant particle size and shape characterization parameters are presented in the form of characteristic values and distribution, allowing users to understand the particles in detail. In addition, this instrument also has the symbols of the times of automation and intelligence, making its operation easier, analysis smarter, and results more stable. It is the preferred partner and right-hand man for particle size testing and particle shape analysis.

Advantages:

1.Intuitively reflect the particle morphology

The surface morphology of the particles is directly reflected on the computer screen, so users can understand the morphology of the particles intuitively and comprehensively.



2.Perfectly stitch multiple images together

The particle images of different fields of view are stitched into one, so that more particles are involved in the analysis and the test results are more representative.

3.Automatically segment of stuck particles

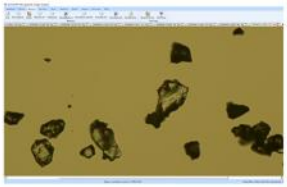
Adopt more advanced particle recognition algorithm to automatically segment various shapes of adherent particles, significantly improving segmentation accuracy, reducing human involvement and effectively shortening image processing time.

4.Adaptive Binarization Function

The adaptive binarization function is used to ensure that the image binarization process is not affected by the shooting light, thus avoiding the loss of particle information due to uneven light. This lays the foundation for the accuracy of subsequent processing.

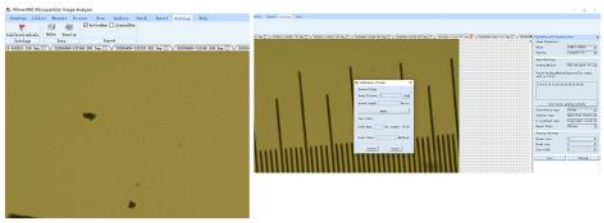
5.Automatically process particle images

The particle image analysis software can automatically process the tool set, integrate binarization, eliminate incomplete frequency particles at the boundary, etc. It only takes one key to process the particle image and generate the analysis results. The operation is simple and the results are reliable.



6.Freely switch particle size units

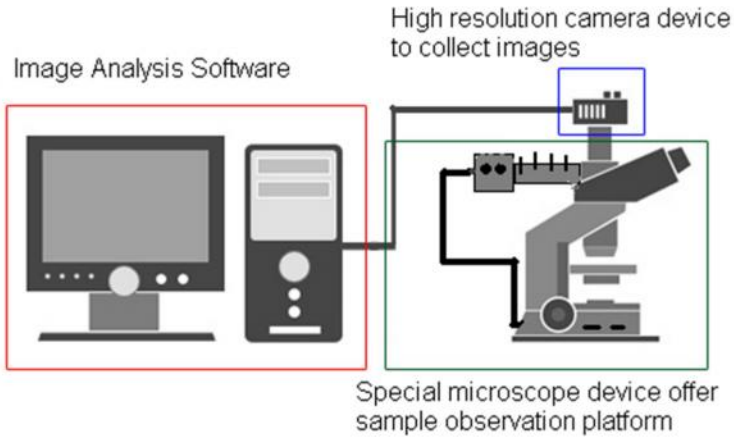
The ruler selection supports multiple length units, including nanometers, micrometers and millimeters. It is convenient for users to further process particle images obtained by electron microscopy and other methods.



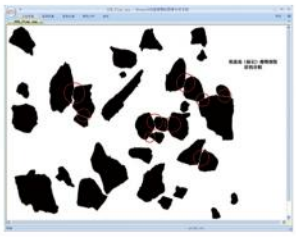
7.Quickly process particles with special shapes

A unique processing algorithm is used for spherical particles. Particles can be directly analyzed without processing the original image. Even if the particles are adhered or overlapped, the analysis result will not be affected. The analysis efficiency of spherical particles is improved.

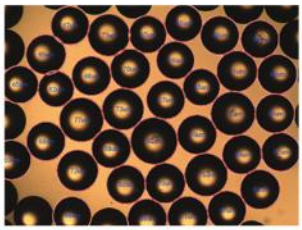
Test Principle



Original particle image



Particle image after automatic segmentation



Graphics data processing

Application

Winner 99E static particle image analyzer used in cement, ceramics, pharmaceuticals, paints, dyes, pigments, fillers, chemical products, catalysts, coal, sediment, dust, flour, food additives, pesticides, explosives, graphite, photographic materials, fuel , metal and non-metal powder, calcium carbonate, kaolin and other powder industry.

Technical parameter:

Model Name		Winner99E
Size Range		1-6000 μm
Maximum Resolution		0.1 micron
Digital camera(CCD)		3 million pixels
Ruler Scale		3.2*3.2um
Segmentation Speed		<1 second
Segmentation Success rate		>98%
Operation system		Win XP/Win7
Connection Port		USB2.0
Microscope system	Eyepiece	1X, 10X, 16X visual field camera eyepiece
	Objective Lense	4X, 10X, 40X, 100X long range achromatic objective group
	Light source	Bottom transmission light source, 6V 20W halogen lamp, brightness adjustable. Optional top metallographic drop light source (with polarizer)
	Objective table	Three dimensional mechanical loading stage size: 185mm * 140mm. Moving range: 50mm x 75mm, coarse and coaxial focusing, Inching: 2um, locking and limiting device
	Max amplification	4-5000
Software function	Static collection	Take the sample morphology into high resolution JPG image
	Image Processing	A variety of drawing tools
	Image stitching	The multiple picture Stitching seamless, get more number of particles in the particle testing in order to improve test representation. But also can stitching accuracy after save a single analysis, to further improve the result accuracy.
	Particles automatic processing tool-set	Automatic elimination of particle adhesion, noise point, boundaries incomplete particles, Automatically fill the hollow area and automatic smooth grain boundaries, etc. 12 automatic processing tools.
	Scale Calibration	After the adoption of national standards calibrated micrometer, simply select each test scale corresponds with the objective value can directly get the actual size of the value of the particles.
	Single particle photo data	Cross-sectional area, volume, aspect ratio etc. 10 specification
	Characteristic parameter	D10、D50、D90、D100 etc.
Report parameters	Overall frequency distribution cumulative distribution	The frequency of particles by number, volume, area and other distribution Distribution and cumulative distribution of data tables, graphs, bar charts, and so on.
	Statistical average diameter	Xnl、Xns、Xnv、Xls、Xlv、Xsv etc.
	Shape parameters	L/D ratio, Aspect ratio, a huge rate, sphericity, surface ratio, specific surface area, circumscribed rectangle parameters etc.
	Number statistics	Number of particles directly observed

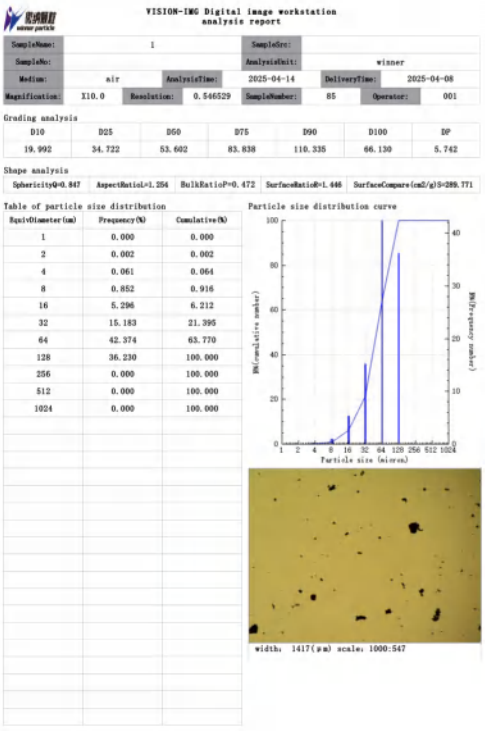
Report interpretation

Header section:
Instrument parameters , sample information

Characteristics of particle size:
The value of particle size characteristics

Particle size chart:
Cumulative distribution and frequency distribution of particle size. It's corresponding to data of particle size distribution table

Particle size table;
Cumulative distribution and frequency distribution of particle size



VISION-IMG Digital image workstation analysis report

SampleName:	1			SampleSrc:			
SampleNo:				AnalysisUnit:	winner		
Medium:	air		AnalysisTime:	2025-04-14	DeliveryTime:	2025-04-08	
Magnification:	X10.0	Resolution:	0.546529	SampleNumber:	85	Operator:	001

Grading analysis

D10	D25	D50	D75	D90	D100	DP
19.992	34.722	53.602	83.838	110.335	66.130	5.742

Shape analysis

SphericityQ=0.847	AspectRatioL=1.254	BulkRatioP=0.472	SurfaceRatioR=1.446	SurfaceCompare(cm2/g)S=289.771

Table of particle size distribution

EquivDiameter(um)	Frequency(%)	Cumulative(%)
1	0.000	0.000
2	0.002	0.002
4	0.061	0.064
8	0.852	0.916
16	5.296	6.212
32	15.183	21.395
64	42.374	63.770
128	36.230	100.000
256	0.000	100.000
512	0.000	100.000
1024	0.000	100.000

Particle size distribution curve

width: 1417(μm) scale: 1000:547

Our some customers

1) Institutions of higher learning and research institutes

Peking University, Tsinghua University, Renmin University of China, Zhejiang University, Shandong University, Jiangsu University,
Tianjin University, Australian University, Indian Institute of Technology, Mongolia University, Beihang University, Southeast University,
China Agricultural University, Shanghai Jiaotong University, Xi'an Jiaotong University, Nanjing University,
The University of Hong Kong, University Of Wollongong, Dalian University of Technology, Ocean University of China,
PSG College of Technology, Institute of Engineering Physics, Beijing Institute of Technology,
Shanghai Medical Device Testing Institute, Guangdong Provincial Medical Device Testing Institute, Beijing Medical Device Testing Institute,
Huazhong University of Science and Technology, University of Science and Technology Beijing,
Chinese Academy of Sciences,Institute of Metal Research, etc. Nanjing University of Aeronautics and Astronautics,

2) Industrial enterprises

Shougang Group Co., Ltd., Jiangsu Shagang Group Co., Ltd., Pangang Group Co., Ltd., Shanghai Huayi Polymer Co., Ltd.,
Jiaozuo Qianye Cement Co., Ltd., Shanshui Cement Group Co., Ltd., China National Petroleum Corporation, Shengli Oilfield,
China Ping An Coal Group, BYD Co., Ltd., Tianneng Battery Group Co., Ltd., Chaowei Power Supply Co., Ltd.,
Guangzhou Libai Enterprise Group Co., Ltd., Nippon Paint Co., Ltd., Zhenjiang Titanium Dioxide Co., Ltd.,
Moze biological Co. Ltd., Korea Conformity Laboratories, PPG Powder Coating Co., Ltd,
Otsuka Pharmaceutical , SIM (USA) INTERNATIONAL INC, Mundipharma. India,
TAIYO INK. Japan, Heraeus. Germany, Osram lighting. Germany,

Length-width ratio Report

VISION-IMG Digital image workstation
analysis report

SampleName:	1			SampleSrc:			
SampleNo:				AnalysisUnit:	winner		
Medium:	air	AnalysisTime:	2025-04-14	DeliveryTime:	2025-04-08		
Magnification:	X10.0	Resolution:	0.546529	SampleNumber:	85	Operator:	001

Grading analysis

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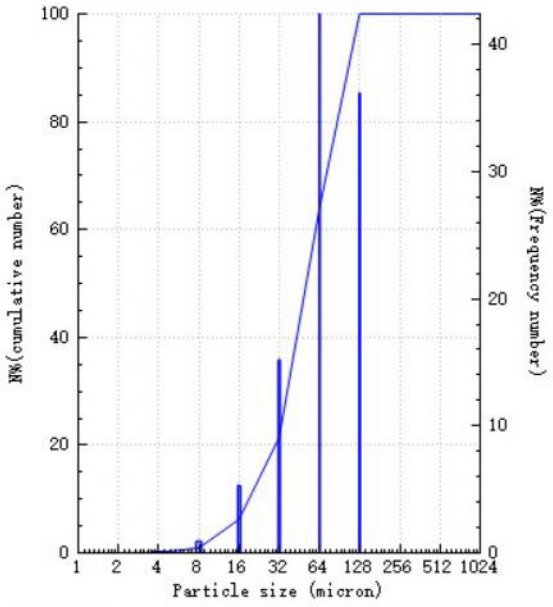
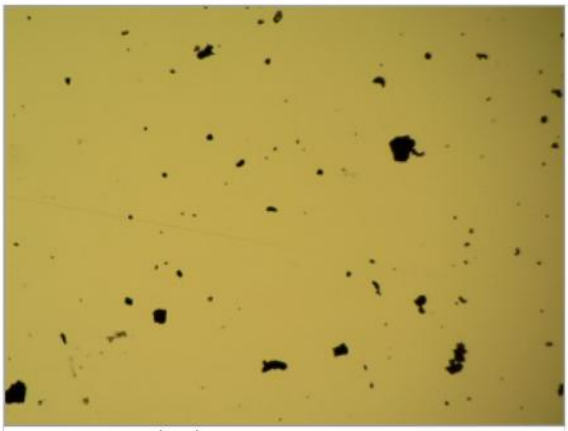
Particle size distribution curve





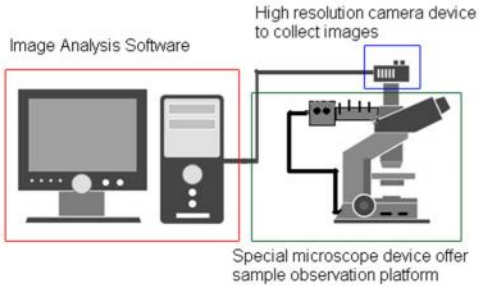
width: 1417(μm) scale: 1000:547

Winner Particle Instrument Quality Assurance

Provide customers with the most professional particle testing solutions

Long service time

Laser particle size analyzer, as an analysis instrument, it doesn't have consumable parts excpe for the stirring parts,it has no transmission parts and no wearing parts; high performance laser, with a long service time of more than 25000 hours, high sensitive photodetectors is a core part, it will not be easy damaged if operate normally; the photodetector array is a key part, as long as it is used properly, it will not be automatically damaged. Therefore, users do not have to worry about the service time of winner instruments at all. According to the customer feedback from Jinan winner return visit, the instrument with the longest service life of the product is more than 15 years.



Low failure rate

The after-sales department Jinan Winner has made statistics on the maintenance failures of the sold instruments, and the failure rate of the instruments is within 3%.

High industry recognition

After 30 years of technical precipitation, Jinan winner has continuously improved its technology in the R&D and production process of instruments according to the characteristics of different industries. With its excellent product quality and high-quality service, it has been highly recognized by practitioners in the powder industry.