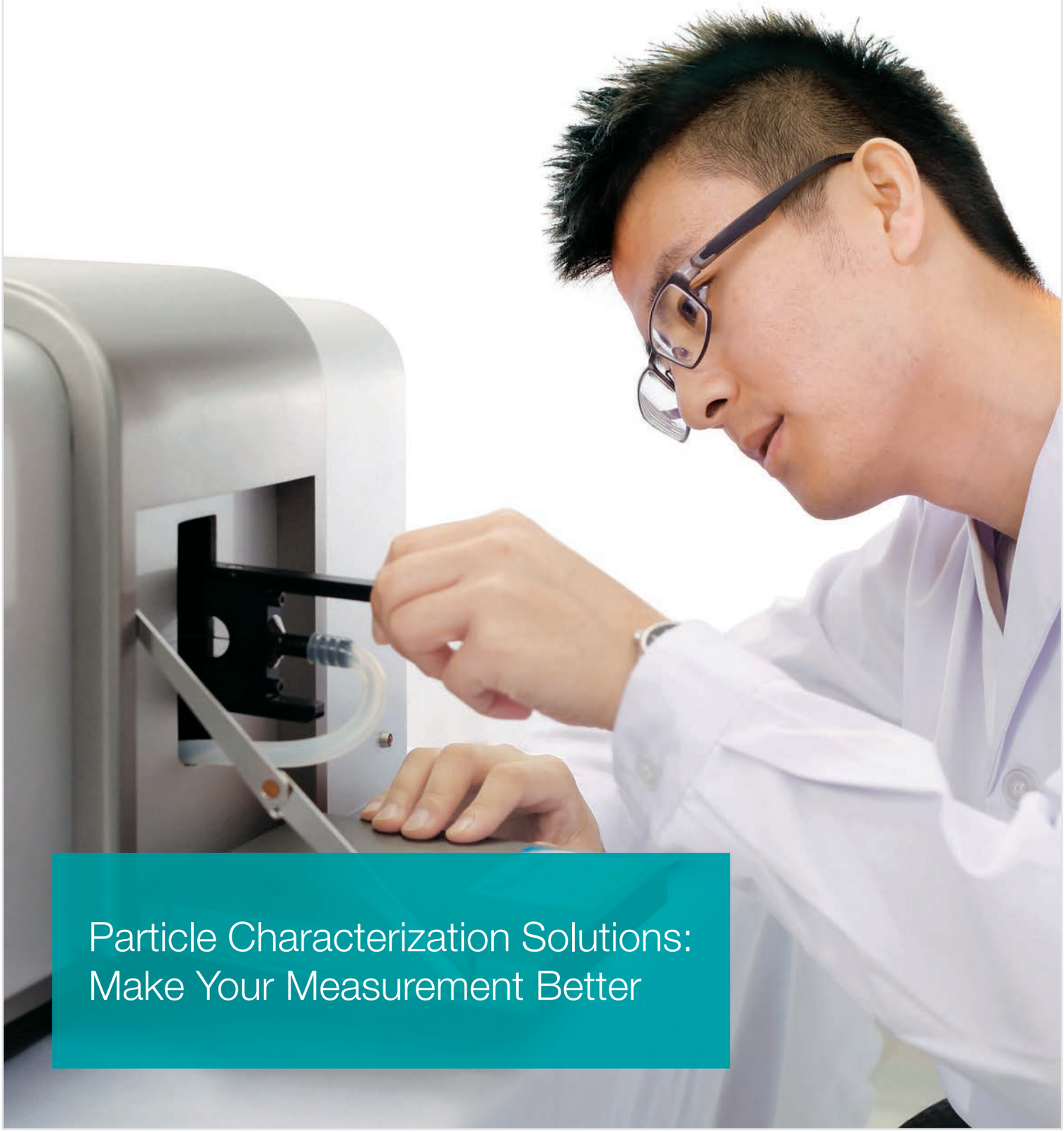
PARTICLE SIZE

PARTICLE SHAPE

POWDER CHARACTERISTICS



Particle Characterization Solutions: Make Your Measurement Better

Bettersize

Best Value • Better Performance

Best Value • Better Performance

BETTERSIZE INSTRUMENTS

Bettersize has become a significant player in the particle sizing business since 1995. We are a team of ~160 employees dedicated to share our expertise to satisfy your instrument and application requirements with reliable products and first-class services.

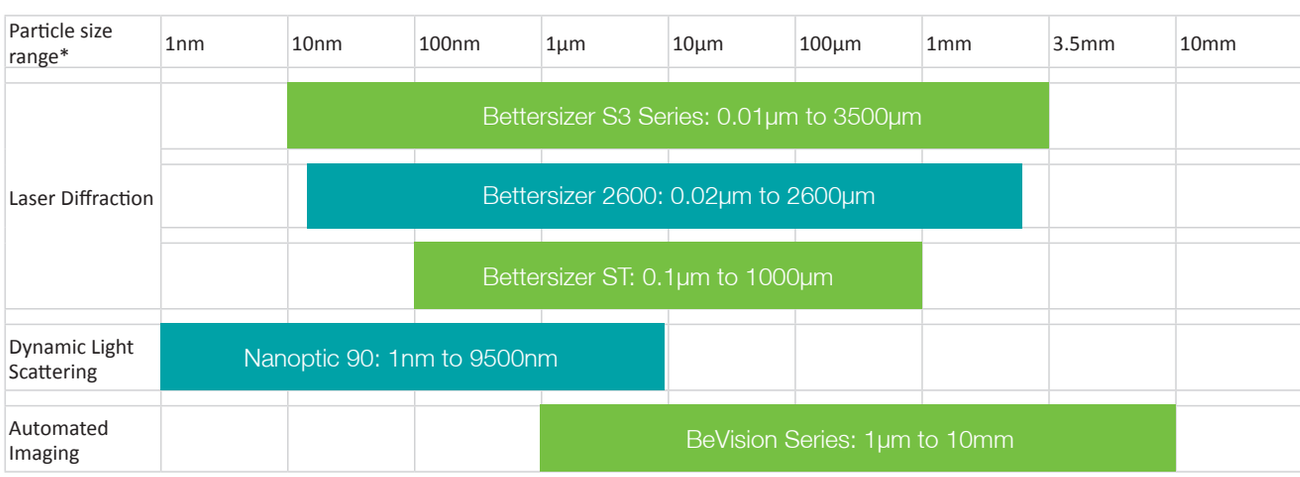
As the leading particle sizing instruments manufacturer in China in terms of brand reputation, sales volume and, most importantly, qualities, Bettersize spare no efforts on R&D each year. We offer a variety of products from basic to advanced research equipment, deliver precise analysis of materials from nanometer to millimeter, and assist scientists and engineers to understand material properties, facilitate research, and improve production efficiency.

Focused on technology innovation, product manufacturing, application research, and after sale service, Bettersize is making the particle size analyzers of China enter into the international advanced ranks.

PARTICLE SIZE SOLUTIONS

Bettersize instrumentation is used in leading industrial and research laboratories for the analysis of **particle size distribution, particle shape, and powder characteristics**. These physical parameters are essential qualities in industries such as pharmaceutical, battery and fuel cell, pesticides, ceramics, mining and minerals, metals, chemicals, biomaterials, pigments, and food and beverages.

Particle size ranges and models



*Particle size ranges are sample dependent

Quality and Manufacturing Expertise

PRODUCT QUALIFICATION

All series of Bettersize instruments have passed **ISO9001** international quality management certification and the **European CE certification**. Laser particle size analyzers obtained the approval of 21 CFR Chapter I Subchapter J, Part 1040.10 and 1040.11.

The software complies with the **U.S. FDA 21 CFR Part 11** regulation, ensure the validity and reliability of measurement results and solve the challenges associated with regulatory requirements.

PARTNERS AND CUSTOMERS

With a solid history of over **11,000 instruments** shipped and installed, we understand what you need. Bettersize has an unwavering commitment to provide cutting edge technology and superior customer services and support.

A partial list of the Company's celebrity partners and customers:

SAMSUNG · UEM · UNCP · UNIVERSITY OF VIRGINIA · YONSEI UNIVERSITY · DUPONT
farben · BYD Build Your Dreams · CBMM · GRUPO ARGOS · AGROFINA · Rainbow
LG Chem · DKC · tecnomyl · HDL APPARATUS · CSPC
FIRS · IMERYS · CEMEX · FORTLEV · GRINM · VOTORANTIM

INNOVATIVE TECHNOLOGY

Guided by the passion of achieving higher accuracy and reliability of measurement results, the talented R&D team of Bettersize works continuously to introduce new advancements and to improve performance of instruments. Following patented technologies has been applied to Bettersize instruments:

- DLOS - Dual Lens Optical System
- DLOIOS - Dual Lens & Oblique Incidence Optical System
- Combination of Laser diffraction and automated imaging
- Refractive index measurement
- Standard Operation Procedure (SOP)
- Automatic alignment function
- Automatic circulation & dispersion
- Accuracy calibration
- Anti-dry burning protection ultrasonic disperser
- Automatic water supply
- Small volume cell assembly system
- Real-time test result monitor
- Automatic water level monitor
- Dew point temperature monitor
- Anti-corrosive circulation & dispersion system
- Dry sampling and dispersion
- Test Report Conversion

APPLICATION INDUSTRIES

Bettersize offers a wide range of models that fit different application requirements of different industries. The instrumentation covers an expanded measuring range of particles from nanometer to millimeter (or micrometer) and provides reliable measurement day-in-day-out.

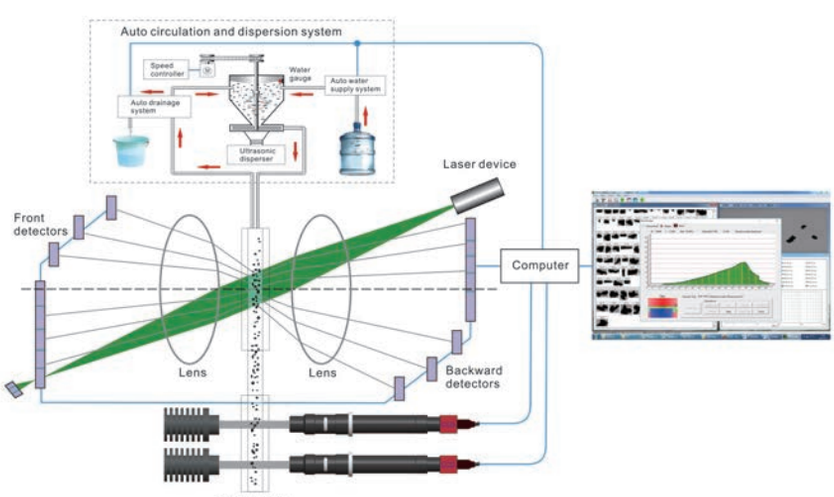
The instruments find applications in the following fields:

- Battery and fuel cells
- Pharmaceutical development
- Pesticides
- Paints, inks and coatings
- Chemicals
- Mining and minerals
- Metal powders
- Ceramics
- Abrasive
- Electronics
- Cement
- Plastics and polymers
- Soil science
- Oil and petrochemicals
- Coal industry
- Food and beverage
- Cosmetics

Bettersizer S3 Plus

COMPLETE PARTICLE SIZE AND SHAPE ANALYSIS ON ONE UNIT

Seamlessly combined laser diffraction and automated imaging in one model, Bettersizer S3 Plus not only achieves a wide size range from 0.01 to 3500μm, but also analyzes all size and shape parameters of a great variety of bulk materials. The reliable performance and user friendly operation mode make Bettersizer S3 Plus the best choice for research in need of material characterization.



Bettersizer S3 Plus schematic diagram

Features and Benefits:

- **Measuring range:** Particle size from 0.01μm to 3500μm. Particle shape from 2μm to 3500μm.
- **Dual Lens & Oblique Incidence Optical System (DLOIOS)**
- **Particle size & shape:** two CCD cameras with 120 fps, 1.3 Mpixel, and lenses 0.5x and 10x. It can combine particle size and shape (0.5x), separate 0.5x or 10x image, 0.5x and 10x joint image to measure particle shape.
- **Refractive index measurement:** improve the accuracy of measurements of materials with unknown refractive index.
- **Ease of use:** with Standard Operation Procedure (SOP), automatic alignment, automatic circulation & dispersion system, and the powerful software, sample analysis on Bettersizer S3 Plus can be a one-button operation.

DLOIOS:

By adding a second lens behind the sample cell and applying the oblique incidence laser structure, DLOIOS increases system reliability and reduces cost by fully utilizing the capabilities of a single diode laser.

Bettersizer S3

STATE-OF-THE-ART LASER PARTICLE SIZE ANALYZER

Bettersizer S3 represents the leading particle size analysis technology for wet dispersion solution. Measuring range from 0.01μm to 3500μm can meet the most stringent requirements of fundamental research, product development, and process control applications. The advanced optical design, DLOIOS, automatic refractive index measurement, and high quality manufacturing ensure convenient, reliable operation and accurate results. SOP and automatic circulation & dispersion system ease the workload and improve user experience.

Bettersizer S3

Features and Benefits:

- **Measuring range:** Particle size from 0.01μm to 3500μm. Particle shape from 100μm to 3500μm.
- **Dual Lens & Oblique Incidence Optical System (DLOIOS)**
- **Particle size & shape:** one CCD camera with 120 fps, 1.3 Mpixel and 0.5x lens. Combine particle size shape analysis.
- **Refractive index measurement.**
- **Ease of use:** Standard Operation Procedure (SOP), automatic alignment, automatic circulation & dispersion system, and the powerful software make sample analysis on Bettersizer S3 a one-button operation.

Model	Bettersizer S3 Plus	Bettersizer S3
Particle Size Measuring Range	0.01μm-3500μm	0.01μm-3500μm
Particle Shape Measuring Range	2μm-3500μm	100μm-3500μm
Measuring Method	– Laser diffraction: DLOIOS – Automated Imaging: 0.5x lens and 10x lens	– Laser diffraction: DLOIOS – Automated Imaging: 0.5x lens
Dispersion System	Wet	Wet
Refractive Index Measurement	Yes	Yes

Bettersize

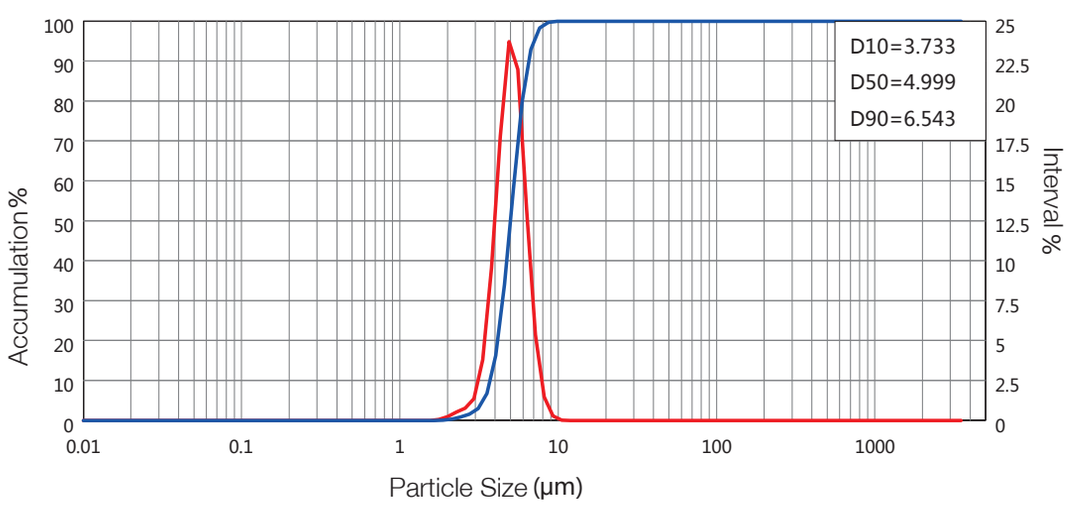
Bettersizer S3 Plus Particle Size Analysis Report

Range : 0.01um - 3500um

Sample :	**DUKE-5um**	**Number :**	**1#**	**Sample Owner :**	**duke**
Operator :	**LC**	**Time :**	**2018-05-15 10:15:40**	**Measured By :**	**bettersize**
Method :	**Laser**	**Preparation:**		**Medium :**	**Water**
Dispersant :		**Ultrasound:**		**Stirring:**	
Optical :	**Mie**	**Mode :**	**8.0 - Multipeak**	**Distribution :**	**Volume**
Particle RI :	**1.59-0i**	**Medium RI :**	**1.333**	**Remark :**	

D[4,3] : 5.066 um	**D[3,2] : 4.817 um**	**SSA : 403.8 m^2/kg**	**OBS. : 2.57 %**
D[2,1] : 4.549 um	**D[1,0] : 4.251 um**	**SPAN : 0.562**	**Residual : 3.748 %**

D03 = 3.136 um	**D06 = 3.510 um**	**D10 = 3.733 um**	**D16 = 4.025 um**	**D25 = 4.308 um**
D75 = 5.763 um	**D50 = 4.999 um**	**D84 = 6.177 um**	**D90 = 6.543 um**	**D97 = 7.405 um**

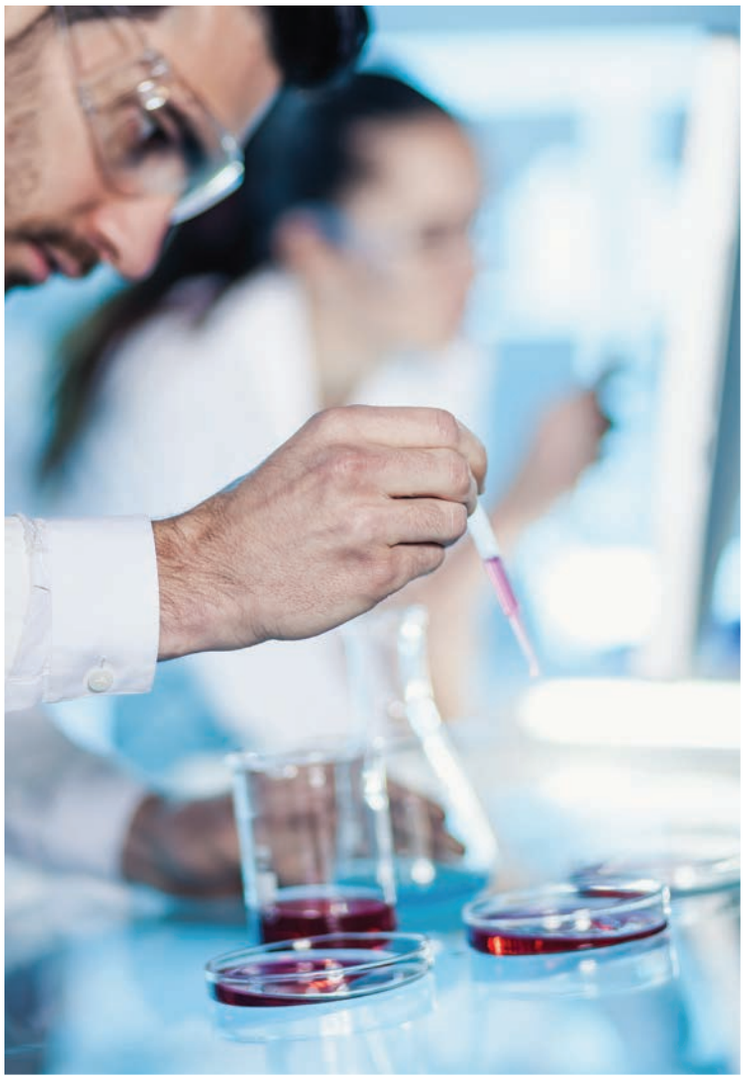


Diam um	Percent
0.020	0.00
0.050	0.00
0.100	0.00
0.200	0.00
0.500	0.00
1.000	0.00
2.000	0.11
5.000	50.01
10.00	99.99
20.00	100.00

Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%	Diam um	Diff%	Cum%
0.010-0.011	0.00	0.00	0.243-0.276	0.00	0.00	5.916-6.721	13.18	92.90	143.8-163.4	0.00	100.00
0.011-0.012	0.00	0.00	0.276-0.313	0.00	0.00	6.721-7.636	5.35	98.25	163.4-185.7	0.00	100.00
0.012-0.014	0.00	0.00	0.313-0.356	0.00	0.00	7.636-8.676	1.46	99.71	185.7-211.0	0.00	100.00
0.014-0.016	0.00	0.00	0.356-0.405	0.00	0.00	8.676-9.858	0.27	99.98	211.0-239.7	0.00	100.00
0.016-0.018	0.00	0.00	0.405-0.460	0.00	0.00	9.858-11.20	0.02	100.00	239.7-272.4	0.00	100.00
0.018-0.021	0.00	0.00	0.460-0.523	0.00	0.00	11.20-12.72	0.00	100.00	272.4-309.5	0.00	100.00
0.021-0.024	0.00	0.00	0.523-0.594	0.00	0.00	12.72-14.45	0.00	100.00	309.5-351.6	0.00	100.00
0.024-0.027	0.00	0.00	0.594-0.675	0.00	0.00	14.45-16.42	0.00	100.00	351.6-399.5	0.00	100.00
0.027-0.031	0.00	0.00	0.675-0.767	0.00	0.00	16.42-18.66	0.00	100.00	399.5-453.9	0.00	100.00
0.031-0.035	0.00	0.00	0.767-0.871	0.00	0.00	18.66-21.20	0.00	100.00	453.9-515.7	0.00	100.00
0.035-0.040	0.00	0.00	0.871-0.990	0.00	0.00	21.20-24.09	0.00	100.00	515.7-586.0	0.00	100.00
0.040-0.046	0.00	0.00	0.990-1.125	0.00	0.00	24.09-27.37	0.00	100.00	586.0-665.7	0.00	100.00
0.046-0.052	0.00	0.00	1.125-1.278	0.00	0.00	27.37-31.10	0.00	100.00	665.7-756.4	0.00	100.00
0.052-0.059	0.00	0.00	1.278-1.452	0.00	0.00	31.10-35.33	0.00	100.00	756.4-859.4	0.00	100.00
0.059-0.067	0.00	0.00	1.452-1.650	0.00	0.00	35.33-40.14	0.00	100.00	859.4-976.4	0.00	100.00
0.067-0.077	0.00	0.00	1.650-1.875	0.05	0.05	40.14-45.61	0.00	100.00	976.4-1109	0.00	100.00
0.077-0.087	0.00	0.00	1.875-2.130	0.23	0.28	45.61-51.82	0.00	100.00	1109-1260	0.00	100.00
0.087-0.099	0.00	0.00	2.130-2.420	0.52	0.80	51.82-58.87	0.00	100.00	1260-1432	0.00	100.00
0.099-0.113	0.00	0.00	2.420-2.750	0.75	1.55	58.87-66.89	0.00	100.00	1432-1627	0.00	100.00
0.113-0.128	0.00	0.00	2.750-3.124	1.36	2.91	66.89-76.00	0.00	100.00	1627-1848	0.00	100.00
0.128-0.145	0.00	0.00	3.124-3.550	3.80	6.71	76.00-86.35	0.00	100.00	1848-2100	0.00	100.00
0.145-0.165	0.00	0.00	3.550-4.033	9.53	16.24	86.35-98.11	0.00	100.00	2100-2386	0.00	100.00
0.165-0.188	0.00	0.00	4.033-4.583	17.79	34.03	98.11-111.4	0.00	100.00	2386-2711	0.00	100.00
0.188-0.214	0.00	0.00	4.583-5.207	23.71	57.74	111.4-126.6	0.00	100.00	2711-3080	0.00	100.00
0.214-0.243	0.00	0.00	5.207-5.916	21.98	79.72	126.6-143.8	0.00	100.00	3080-3500	0.00	100.00

Dandong Bettersize Instruments Ltd. Http : //bettersize.com.hk E-mail : info@bettersize.com Tel : 0086-415-6184440

System Status A:0-0-0-0-0-0-0-1-1 B:0-0-0-0-100-0 C:0-68-86-1-3 D:0-0-0.9935-0-1 E:89-0-0-3-0 F:0-800-1-0.5 G:1-1-1-2-2 H:1-1.048-1.05-1



Bettersizer 2600

INTEGRATED AND ROBUST LASER PARTICLE SIZE ANALYZER (WET & DRY DISPERSIONS)

The integrated and robust laser particle size analyzer, Bettersizer 2600, can deliver reliable particle size measurement results from submicron to millimeter. Driven by the innovative optical system and Standard Operation Procedure (SOP), the 2600 strikes a harmonious balance between high-functionality, easy operation, low maintenance, and cost-effectiveness.

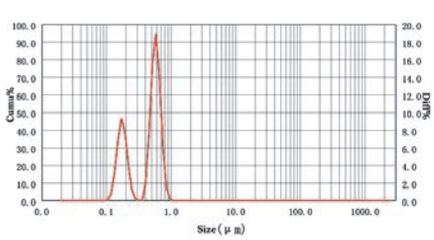
Bettersizer 2600 (Wet & Dry)

Features and Benefits:

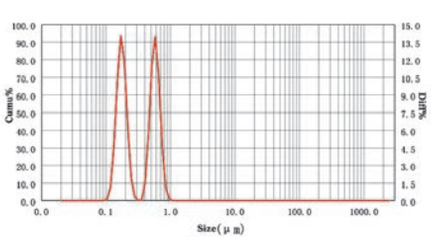
- **Measuring range:**
  Wet: 0.02μm to 2600μm
  Dry: 0.1μm to 2600μm
- **Dispersion type:** Wet and Dry
- **Optical system:** Fourier and Inverse Fourier optical system, inclined sample cell
- **Repeatability:** ≤0.5% (Wet) ; ≤1% (Dry) (GBRM D50)
- **Accuracy:** ≤0.5% (Wet) ; ≤1% (Dry) (GBRM D50)
- **Detector:** 92 pieces (forward, lateral, backward)
- **Detection range:** 0.016-165 degree
- Standard Operation Procedure (SOP)
- Automatic Alignment
- Accuracy Calibration
- Automatic Circulation & Dispersion

Resolution and sensitivity:

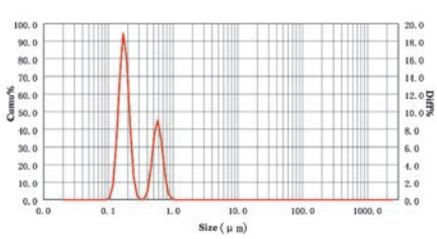
The resolution and sensitivity of Bettersizer 2600 as verified as below: sample A was gradually added to sample B, the graphs change correspondingly.



Sample A < Sample B



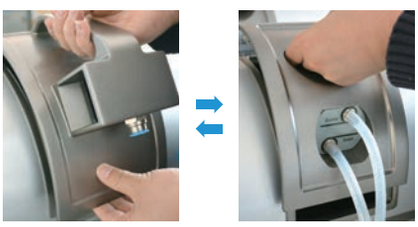
Sample A = Sample B

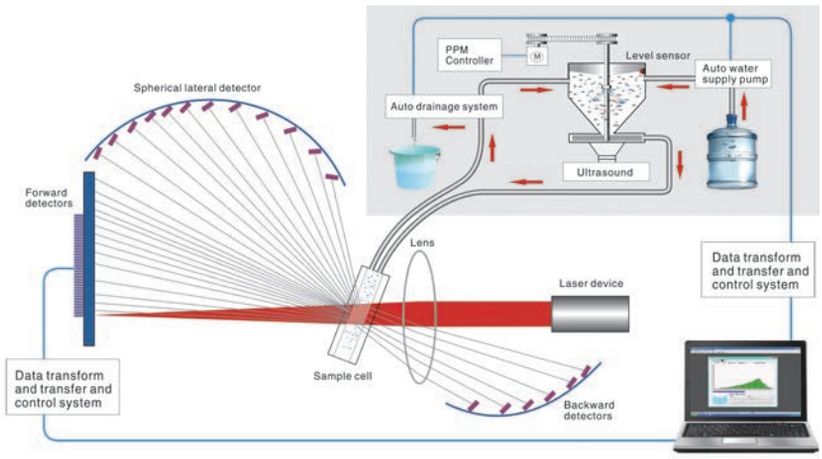


Sample A > Sample B

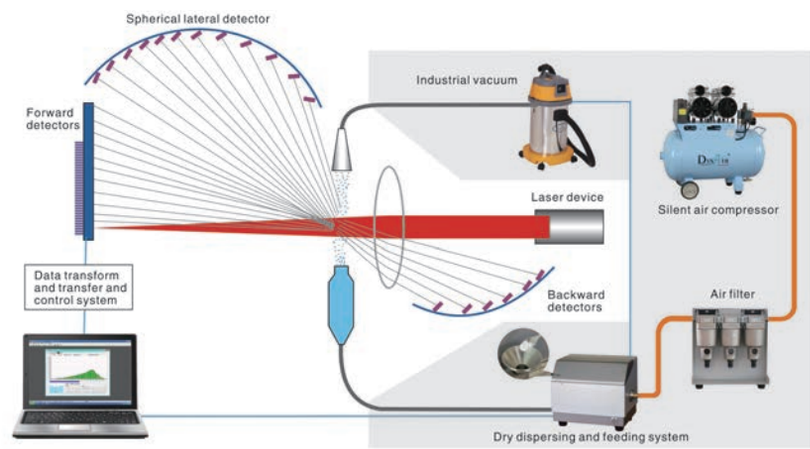
Automatic Circulation & Dispersion System:

Bettersizer 2600 offers a complete sample circulation & dispersion system for both wet and dry methods, which make sure each particle would be captured when going through the laser.

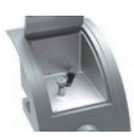




Wet dispersion & circulation system



Dry dispersion system

Sample Dispersion Modules	BT-802	Small Volume Module	BT-902	BT-903
Sample Dispersion	Wet sample dispersion	Wet small volume sample dispersion	Dry sample dispersion	Dry small volume sample dispersion
Dispersion Module				
Combine with Main Device				
Volume	600ml	8ml, 0.005g-0.1g	0.2g-10g	0.05g-1g
Automation	Full automated	Full automated	Full automated	Full automated

Bettersizer ST

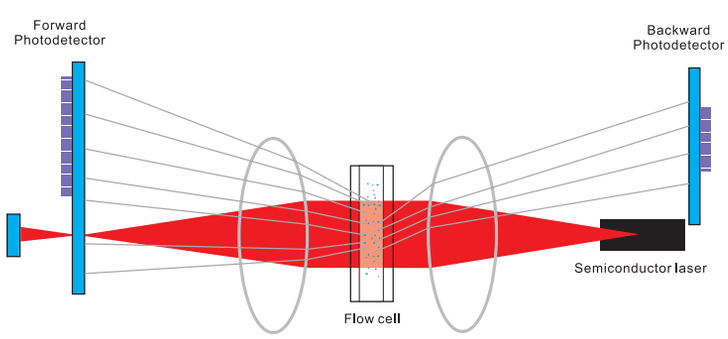
RUGGED AND COMPACY LASER PARTICLE SIZE ANALYZER

Bettersizer ST includes the patented Dual Lens Optical System (DLOS) which provides a compact design without resorting to folding optics that are susceptible to misalignment caused by vibrations often present in most industrial labs.

The ST incorporates 86 high speed detectors, which produces the high resolution data from 0.1 to 1000 microns. This high speed detector system delivers fast results, often in as little as 15 seconds.

Features and Benefits:

- **Measuring range:** Particle size from 0.1μm to 1000μm.
- **Dual Lens Optical System (DLOS):** provides higher accuracy.
- **Standard Operation Procedure (SOP)**
- **Compact design:** saves work space.
- Automatic alignment and automatic testing lead to good repeatability with relative standard deviation (%RSD) of less than 1%.



Dual Lens Optical System (DLOS) of Bettersizer ST

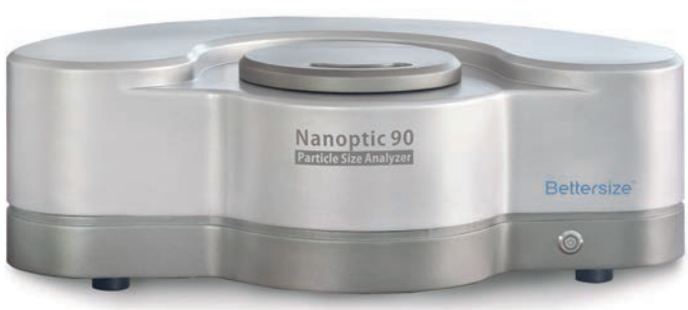
DLOS:

The Dual Lens Optical System (DLOS) detects both the forward and backscatter laser diffraction pattern. This breakthrough technology results in increased particle size measurement range without the added cost of a second light source. This single laser design provides for higher accuracy due to a consistent wavelength throughout the full measurement range.

Nanoptic 90

HIGH SENSITIVITY NANO-PARTICLE ANALYZER

Nanoptic 90 is a nano-particle analyzer based on the well-known technique of dynamic light scattering (DLS). Nanoptic 90 can measure nano materials with size down to 1nm. The high-power long lifetime laser and high sensitivity PMT provide Nanoptic 90 the ability to demonstrate rapid and accurate testing results.

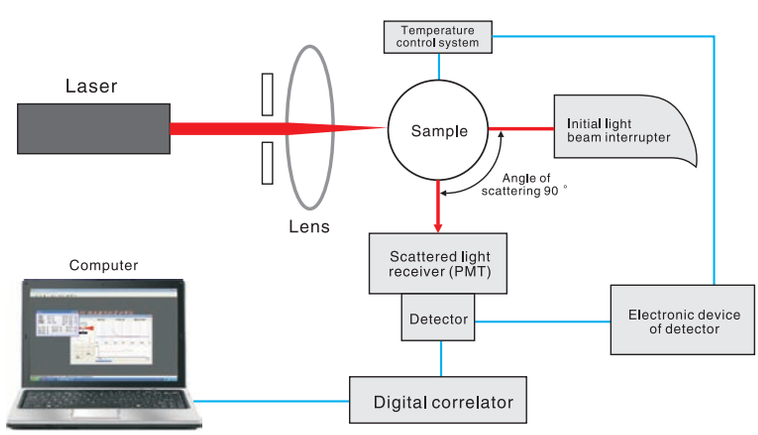


Features and Benefits:

- **Measuring range:** Particle size from 1nm to 9500nm
- **Fast analysis:** less than 5 minutes per test.
- **Small quantity of sample required:** 4ml and 1ml sample cell.
- High-precision temperature control system provides accuracy of ±0.5°C.
- Repeatability: ≤1% (GBRM D50)
- Accuracy: ≤1% (GBRM D50)
- Scattering angle: 90°
- Dynamic light scattering (DLS)
- Detector: PMT (Photomultiplier)

DYNAMIC LIGHT SCATTERING (DLS):

Nanoptic 90 works based on dynamic light scattering (DLS) theory. Dynamic Light Scattering is an ideal method for sizing proteins, colloids, emulsions, nanoparticles, CMPs, inkjet inks, and a variety of other dispersions used in nanotechnology and medicine.



Nanoptic 90 schematic diagram

Bettersizer 2000S

REAL-TIME SPRAY PARTICLE SIZE ANALYZER

The laser diffraction sensor, Bettersizer 2000S, is designed for particle size analyses of sprays containing droplets or solid particles ranging from 1µm to 2000µm. The width adjustable measuring zone supports the flexible adaptation of Bettersizer 2000S to individual customer requirements in challenging technical applications in laboratories or pilot plants.

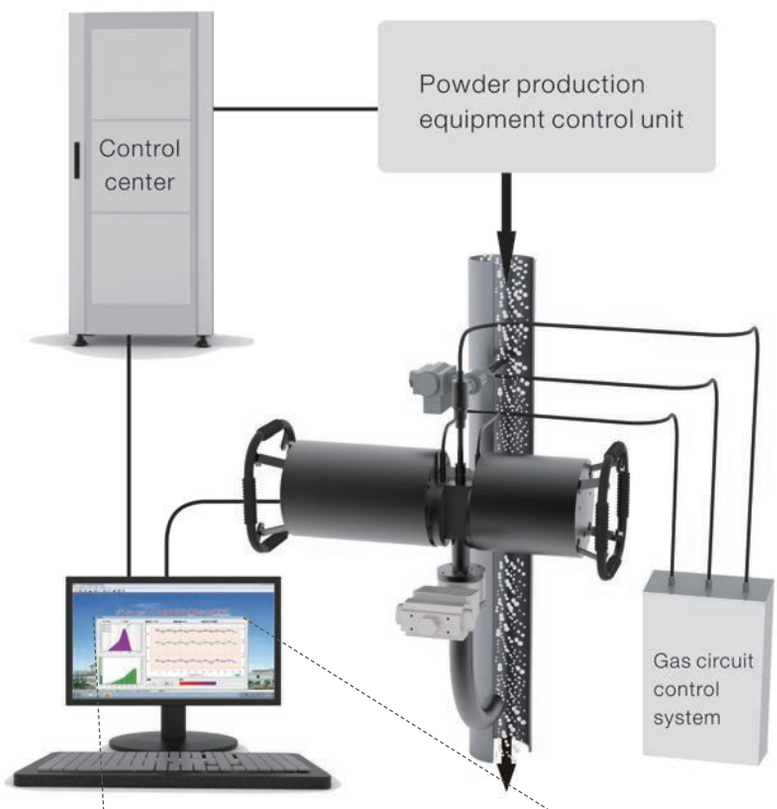
Features and Benefits:

- **Measuring range:** Particle size from 1µm to 2000µm.
- **Width adjustable measuring zone**
- **Repeatability:** <3%
- **Accuracy:** <3%
- **Fastest testing speed:** ≤10 seconds
- **Sealing level:** IP65
- **Lens protection:** protective groove device with oblique angle
- **Interface mode:** USB 2.0 or 3.0
- **Flexible installation** based on the site environment and customer needs.

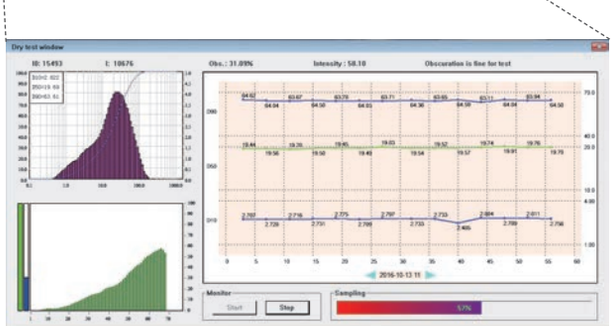
BT-Online1

ROBUST AND REAL-TIME ONLINE PARTICLE SIZE ANALYZER

BT-Online1 is a robust online particle size analyzer for real-time monitoring and quality control in powder manufacturing industries. Based on Standard Operation Procedure (SOP), BT-Online1 can automatically sample, measure, recover and process data directly from the powder pipeline, and provide 24-hour particle size detection and control for a variety of dry powder production lines.



BT-Online1 operation diagram



BT-Online1 test window

Features and Benefits:

- **Measuring range:** Particle size from 0.1μm to 1000μm
- **Accuracy:** ≤3% (GBRM D50)
- **Repeatability:** ≤3% (GBRM D50)
- **Standard Operation Procedure (SOP)**
- Automatic Alignment
- Automatic Calibration
- **Detector:** 68 pieces
- Typical measurement time: ≥1min
- High-performance fiber lasers with long lifetime.

Safe and robust online function

Equipped with power interruption protection and over-pressured protection functions, BT-Online1 can shutdown the sequence automatically under abnormal operating conditions to protect lens pollution. Its robust design can assist in haphazard nature and electromagnetic interference prone environment.

BT-Online1 production line

BeVision D1

DYNAMIC IMAGE ANALYZER (DRY DISPERSION)

BeVision D1 is a microscopic image particle size and shape analyzer provides non-destructive measurement to coarse particles and millimeter range powder materials. High-speed CCD camera and multi-threading software of BeVision D1 allow quick identification of particles and obtain stable and accurate measuring results.

Features and Benefits:

- **Measuring range:** Dry dispersion: 30μm to 10,000μm.
- **Optimized software:** identify 10,000 particles per minute. Automatic recognition of agglomerated powder to achieve accurate results.
- **Analysis parameters:** particle size distribution, D100, content for a specific interval, aspect ratio, circularity and radius-thickness ratio.
- **High-speed CCD camera**: 120 images per second, microsecond exposure time, avoid trailing phenomenon in moving particle.
- **Sampler:** the dry sampler uses electromagnetic vibration feeding, gravity-driven dispersion, which is suitable for coarse samples and agglomerated particles.

Bettersize

BeVision D1(Dry) Particle Size Analysis Report

Range : 30 - 10000 μm

Sample: TYAB(20-40)-1 Sample Owner: Bettersize

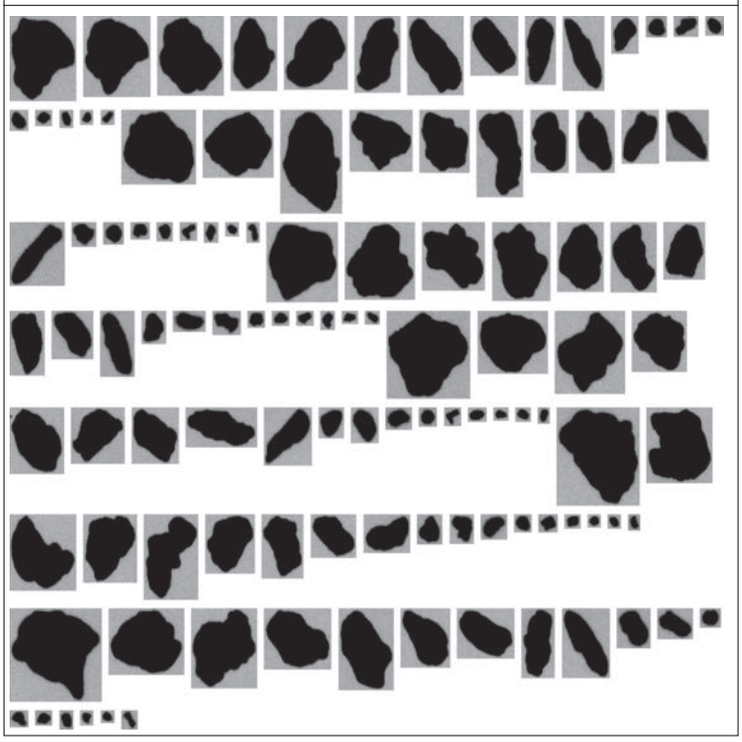
Sample NO.: 1 Measured By : Bettersize

Operator: Shiqi Liu Date: 2018-06-15 Time: 11:22:45

Remark: Distribution: Volume

Size(um)	Diff%	Cumu%
100.0 - 114.1	0.00	0.00
114.1 - 130.2	0.00	0.00
130.2 - 148.5	0.00	0.00
148.5 - 169.5	0.00	0.00
169.5 - 193.4	0.00	0.00
193.4 - 220.7	0.00	0.00
220.7 - 251.8	0.00	0.00
251.8 - 287.3	0.00	0.00
287.3 - 327.9	0.00	0.00
327.9 - 374.1	0.00	0.00
374.1 - 426.9	0.02	0.02
426.9 - 487.1	0.16	0.18
487.1 - 555.8	0.92	1.10
555.8 - 634.2	3.65	4.75
634.2 - 723.7	13.34	18.09
723.7 - 825.8	26.21	44.30
825.8 - 942.3	28.64	72.94
942.3 - 1075	19.16	92.10
1075 - 1226	7.03	99.13
1226 - 1400	0.87	100.00

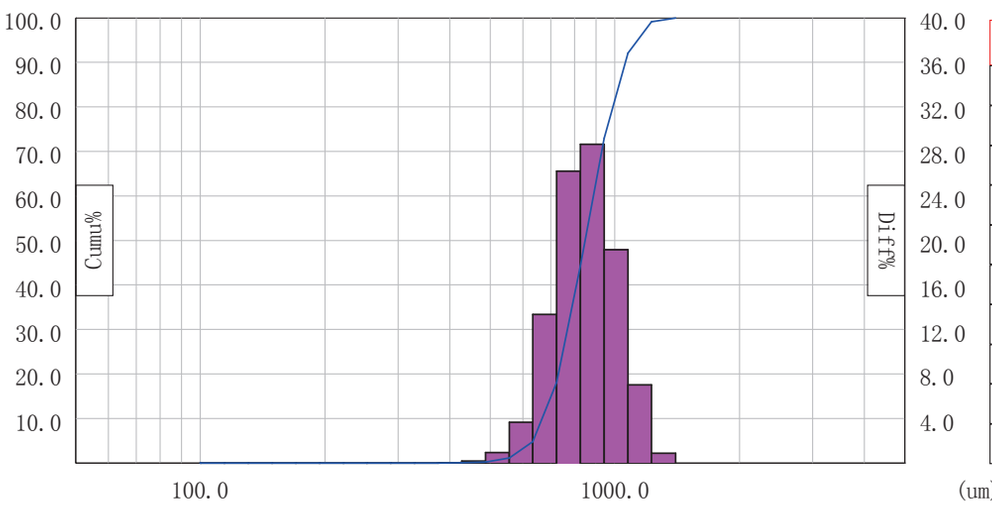
Single Particle Image



D03=600.8 um D06=642.5 um D10=669.4 um D16=709.6 um D25=754.5 um

D50=846.8 um D75=951.0 um D84=989.0 um D90=1046 um D97=1141 um

Quantity: 36870 Max Dia.: 1363 um Min Dia.: 100.4 um SSA: 0.002 m^2/g Span: 0.445



Diam um	Percent
200.0	0.00
300.0	0.00
400.0	0.00
500.0	0.25
600.0	2.96
700.0	14.56
800.0	37.31
900.0	62.94
1000	86.58
1500	100.00

Dandong Bettersize Instruments Ltd. Http://www.bettersize.com E-mail:info@bettersize.com Tel:0086-415-6163800

BeVision W1

DYNAMIC IMAGE ANALYZER (WET DISPERSION)

BeVision W1 is a high-resolution dynamic image particle size and shape analyzer. Based on sheath flow theory, BeVision W1 can capture each particle and deliver accurate image data. BeVision W1 is the best solution for scientific research and quality control.

Features and Benefits:

- **Measuring range:** Wet dispersion: 4μm to 400μm.
- **Analysis parameters:** particle size distribution, D100, content for a specific interval, aspect ratio, circularity and radius-thickness ratio.
- **Sheath flow theory:** ensures each individual particle passes through the focal plane of the cell sequentially, eliminates particle overlapping and defocus issues.
- **Optimized software:** identify 10,000 particles per minute. Automatic recognition of agglomerated powder further improves accuracy.

BeVision M1 / BeVision S1

BeVision M1: CLEANLINESS ANALYSIS EXPERT

BeVision M1 is an automatic image scanning system for filter paper cleanliness analysis. Equipped with a metallurgical microscope, programmable motorized stage, autofocus function, and high-resolution CCD camera, BeVision M1 can capture and recognize each individual particle, automatically stitching the images to a large panorama.

Features and Benefits:

- **Measuring range:** Particle size and shape: 1μm to 10,000μm.
- **Panorama:** systematically stepping and scanning of a defined region, capturing an image at every stepping interval. The software will seamlessly stitch the captured images into one high-resolution panorama.
- **Particle size and shape analysis:** particle size distribution, D100, content for a specific interval, aspect ratio, circularity and radius-thickness ratio.

BeVision S1: CLASSIC IMAGE ANALYZER FOR PARTICLE SIZE AND SHAPE

BeVision S1 employs the latest software particle image processing technology for the traditional microscope imaging method, providing intuitive and accurate particle size distribution analysis. BeVision S1 is widely used in particle shape observation and analysis fields, such as grinding abrasives, super-hard materials, spherical materials, and metal powder abrasives.

Features and Benefits:

- **Measuring range:** Particle size and shape: 1μm to 3000μm.
- **Image processing:** in order to increase the statistical representation of the sample, collections of multiple images can be analyzed together to provide a true representation of the particle distribution of the sample.
- **High accuracy of particle size analysis:** calibration of the pixel size can be performed using the standard stage micrometer.
- **Analysis parameters:** particle size distribution, D100, content for a specific interval, aspect ratio, circularity and radius-thickness ratio.

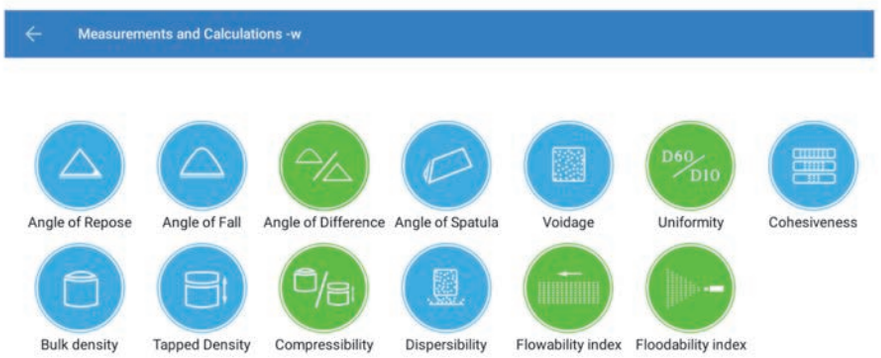
PowderPro A1

AUTOMATIC
POWDER CHARACTERISTICS TESTER

PowderPro A1 automatically analyze powder characteristics such as Angle of Repose, Angle of Fall, Angle of Spatula, Bulk Density and Tapped Density of a variety of powder materials. Applied image technology automatically controlled by PAD or Android App, PowderPro A1 is an essential tool to research and assess powder materials.

Features and Benefits:

- **Measured parameters:** Angle of Repose, Angle of Fall, Angle of Spatula, Voidage, Cohesion, Bulk Density, Tapped Density, Dispersibility, and Sieve Size.
- **Calculated parameters:** Angle of Difference, Uniformity, Compressibility, Flowability Index, and Floodability Index.
- **Automatic measurement:** images are captured with CCD and are processed to obtain the Angle of Repose, Angle of Fall, Angle of Spatula, etc.
- **Patented rotary vibration technology:** ensure smooth surface of the powder and to improve measurement accuracy.
- **Ease of use:** operation App on PAD or mobile phone.
- **Compliance:** testing methods are fully compliant per ASTMD6393-14, USP32-NF27<616>, European Pharmacopoeia EP7.0 07/2010: 20934, GB/T16913-2008-4.5, GB/T1479.1-2011, and GB/T5162-2006.



PowderPro M1

MANUAL
POWDER CHARACTERISTICS TESTER

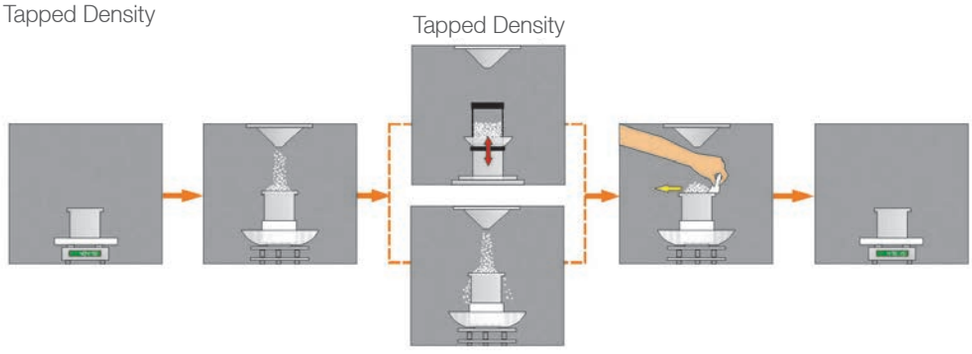
PowderPro M1 is a basic version of PowderPro A1. It can perform the same measurement and analysis of PowderPro A1 through manual process. PowderPro M1 is widely used in education field.

Features and Benefits:

- **Measured parameters:** Angle of Repose, Angle of Fall, Angle of Spatula, Angle of Slide, Voidage, Cohesion, Bulk Density, Tapped Density, Dispersibility, Angle of Slide, and Hall Flow Rate (customized).
- **Calculated parameters:** Angle of Difference, Uniformity, Compressibility, Flowability Index, and Floodability Index.
- **Compliance:** testing methods are fully compliant per ASTMD6393-14, USP32-NF27<616>, European Pharmacopoeia EP7.0 07/2010: 20934, GB/T16913-2008-4.5, GB/T1479.1-2011, and GB/T5162-2006.

Measure Angle of Repose

Measure Bulk Density and Tapped Density



BeDensi series / HFlow-1 / BT-50

BEDENSI T1 / T2 / T3

TAPPED DENSITY METER

BeDensi T series includes BeDensi T1 (one cylinder), BeDensi T2 (two cylinders) and BeDensi T3 (three cylinders). T2 and T3 can measure Tapped Density for 2 or 3 powder samples simultaneously.

BeDensi T series is compliant per international standard ISO3953: 1993 and the United States Pharmacopeia for drug Tapped Density testing.

BEDENSI B1-S

BULK DENSITY METER (FOR METAL POWDER)

BeDensi B1-S Bulk Density meter uses Scott capacity method to measure Bulk Density of various metal powders. Manufacturing standard of BeDensi B1-S meets GB / T5060-1985 (ISO 3923/2).

BEDENSI B1

BULK DENSITY METER (EXCEPT FOR METAL POWDER)

BeDensi B1 Bulk Density meter adopts natural deposition method. It is fully compliant per GB / T16913.3-1997- Part III: Determination of Bulk Density.

HFLOW-1

METAL POWDER FLOWABILITY TESTER

HFlow-1 evaluates the flowability of metal powder by testing the capability of sample to flow through a 2.5mm standard funnel.

The design and production of HFlow-1 Hall Flow meter is based on standards of GB / T1482-2010 and ISO4490-2008.

BT-50

ULTRASONIC DISPERSER

BT-50 is the ultrasonic disperser that supports Bettersizer series particle size analyzer and Nanoptic 90 before testing sample.

Services and Support

With a solid history of over 11,000 instruments shipped and installed, we understand the importance of customer services and support. Our goal is to improve your productivity through comprehensive and professional support, service, and information. Our commitment is to support you before, during, and after the sale throughout the lifetime of our instruments.

Contact Us:

- Contact support team by email:

info@bettersize.com

- Contact support team by phone call:

Tel: +86-415-6163800

Fax:+86-415-6170645

- Contact sales by email:

European + Africa:

Email: wenzhe.sun@bettersize.com

Asia + Middle East+ Oceania:

Email: info3@bettersize.com

South America +North America:

Email: Susan.song@bettersize.com

Bettersize

Best Value • Better Performance

Dandong Bettersize Instruments Ltd.

Address: No. 9, Ganquan Road, Jinquan Industrial Park, Dandong, Liaoning, China

Postcode: 118009

Tel: +86-415-6163800

Fax: +86-415-6170645 / +86-415-6163800

Website: www.bettersize.com

Email: info@bettersize.com