LABTRON

Image Particle Shape and Size Analyzer

LISA–A Series

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Image Particle Shape and Size Analyzer

Image particle shape and size analyzer LISA-A10

Image particle shape and size analyzer LISA-A10 is an easy to operate and accurate particle characterization tool for measuring over 1μm -6000μm particle size range. It uses computer image analysis technology to analyze and process particle information obtained through well designed professional optical microscope and latest high speed CMOS camera to determine particle size distribution and particle morphology.

Features

- Well-designed professional optical microscope
- Latest high-speed CMOS camera
- Automatic analysis algorithm to improve accuracy rate of automated analysis
- Binarization methods to improve the data processing and analysis capabilities
- Intuitive test results endow users with more comprehensive understanding of the morphology, status, process changes and other product information when testing results
- Image stitching to produce seamless results in order to improve test representation and accuracy
- 12 automatic particle processing tool-set
- Intuitive measurement resolution up to 0.1μm/pixel
- Provides Clear image
- Wide measuring range
- User friendly

Applications

Image particle shape and size analyzer is used in: pharmaceutical research and quality control applications, food products particle sizing application, chemical industry for particle sizing applications like granulation, milling, crystallization kinetics and product formulation applications, abrasives, catalysts, ceramics etc.

Image Particle Shape and Size Analyzer

Specifications

Model no.		LISA-A10
Executive standard		ISO13322-1: 2004
Measuring range		1μm-6000μm
Technology		Computer image analysis technology
Microscope system	Light source	6 V/20 W halogen lamp
	Objective lens	4X,10X,40X,60X,100X long distance achromatic (flat field) lens group
	Eyepiece lens	1X,10X,16X wide field camera eyepiece lens
	Maximum amplification	1600
	Stage dimension	185 x 140 mm
	Stage moving range	50 x 75 mm
Camera system	Digital camera	3 million pixels
	Pixel size	3.2μm x 3.2μm
	Output	USB 2.0
Particle properties measured		Morphology & size
Particle shape parameters		Aspect ratio, sphericity, surface ratio, specific surface area, circumscribed rectangle parameters etc.
Software function	Static collection	Take the sample morphology into high resolution JPG image
	Single particle photo data	Cross-sectional area, volume, aspect ratio etc.
	Characteristic parameter	D10, D50, D90, D100 etc.
Report parameters	Statistical average diameter	Xnl, Xns, Xnv, Xls, Xlv, Xsv etc.
	Number statistics	Number of particles directly observed
Dimension (L x W x H)		150 x 80 x 300 mm
Net weight		3 kg

Image Particle Shape and Size Analyzer

Image particle shape and size analyzer LISA-A11

Image particle shape and size analyzer LISA-A11 is an advanced and powerful characterization tool that overcomes the shortcomings of a static particle image analyzer. It uses high speed camera, which images moving particles of over 2µm -6000µm size range. In addition, it is well equipped with a built-in dispersion system.

Features

- Analyzes both size and shape
- High speed camera having maximum resolution of 1028 x 1024 images moving particles
- Maximum number of particles being analyzed is not limited
- Strong data representation
- Wide measuring range as compared to laser particle analyzer
- Built-in dispersion system
- Ultrasonic dispersion minimizes particle aggregation and improves accuracy of results
- Data report can include more than ten parameters
- Integrated POWDER software collects images at high speed, analyzes particle size/ shape, defocuses and records all data for further analysis.
- Executes international standard ISO/DIS-13322-2
- Ensures accuracy and reproducibility

Applications

Image particle shape and size analyzer is used in: pharmaceutical research and quality control applications, food product particle sizing application, chemical industry for particle sizing applications like granulation, milling, crystallization kinetics and product formulation applications, abrasives, catalysts, ceramics etc.

Image Particle Shape and Size Analyzer

Specifications

Model no.	LISA-A11
Executive standard	ISO/DIS-13322-2
Measuring range	2μm-6000μm
Dispersion	Ultrasonic, Stirring, Circulation
CCD	High speed and resolution CCD (The shutter speed is 10-6/s)
Maximum resolution	1028 x 1024
Accuracy error	< 3%
Reproducibility	< 3%
Shape parameters	L/D ratio, bulkiness ratio, sphericity, surface factor etc.
Distribution parameters	D10, D50 (Median diameter), D90 etc.
Average size	Xnl, Xns, Xnv, Xls, Xlv, Xsv etc.
Statistical methods	Probability/cumulative distribution of particle parameters against quantity, volume, area etc.
Communication interface	IEEE1394 standard interface
Dimension	760 x 440 x 460 mm
Net weight	25 kg