



**东莞中力仪器科技有限公司**  
Dongguan Zhongli Instrument Technology Co., Ltd

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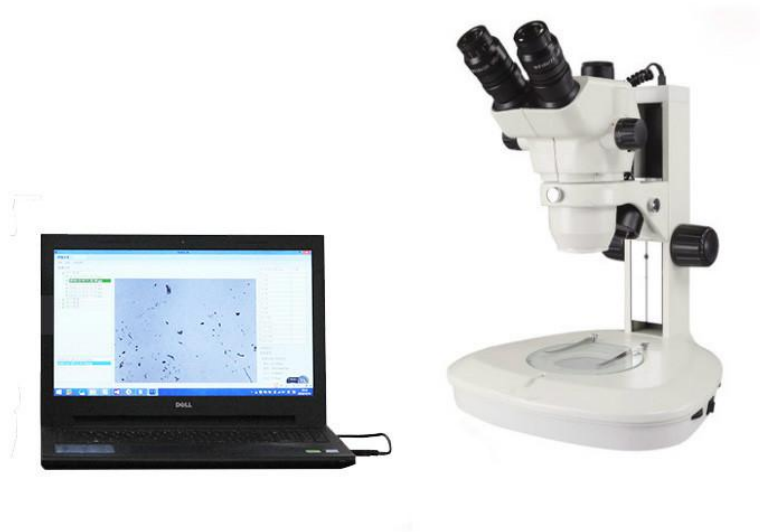
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## **Name: ZL-3019 Carbon black dispersion tester**



→ **Direct Manufacturer.**

→ **Excellent Quality.**

→ **Technical Innovation.**

→ **Fast Shipping.**

→ **Superior Service.**

## **Overview**

ZL-3019 carbon black dispersion tester is a special testing instrument for the dispersion of carbon black in rubber designed according to the international standard GBT6030-2006



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and the international standard ISO-11345. It is a testing instrument for the dispersion of carbon black in rubber and can measure carbon black. The dispersion grade, percentage of dispersion, particle size, shape, dispersion and particle area of the clusters and particles.

## Principle:

When rubber (vulcanized rubber or rubber compound) is cut, because the undispersed carbon black aggregate has a higher hardness relative to the surrounding rubber medium, it will cause the deviation of the cutting trace and cause the cut surface to be rough and uneven. And the larger the undispersed carbon black aggregates, the larger the surface roughness. A certain angle of light is used to illuminate the cut surface of the rubber, and these conditions on the rubber surface are magnified and directly reflected on the display screen, which is recorded as a digital image. The digital image is processed by the computer. According to the size and frequency of the raised agglomerates on the cut surface, the dispersion grade of carbon black dispersion is automatically evaluated according to relevant standards (automatic grading function), which characterizes the degree of carbon black dispersion in the rubber. It can also be directly compared with standard pictures stored in the instrument or standard pictures established by the company (image comparison function).

## Instrument features:

1. Adopt advanced modular design, integrated by computer, optical, electrical, digital conversion, testing software and other systems. It has functions such as automatic classification, image comparison, particle size analysis, result storage and report printing.
2. It is of great significance to quickly and accurately grasp the dispersion of carbon black in rubber compounds, to predict the physical properties of the rubber compounds, control the mixing process, ensure the quality of rubber products, improve production efficiency, save energy, and reduce costs.
3. Ligand stereo microscope, 5 million pixel CMOS microscope HD camera.
4. Equipped with micrometer scale, convenient and efficient pixel point size calibration.
5. Click the particle image to display the morphological parameters of the particle.
6. The software is independently developed and can be customized according to customer needs.
7. The software supports deleting the selected carbon black particles.
8. Using USB2.0 data interface, it has stronger compatibility with microcomputer. The instrument is separated from the computer and can be equipped with any computer with a USB interface.



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9. Support the export of single particle images.
10. The software adapts to various operating systems, such as XP\WIN7\WIN8\WIN10, etc.
11. The measurement results are rich in output data, stored in the database, and can input any parameters, such as the operator's name, sample name, date, time, etc., to call and analyze.
12. The instrument has beautiful appearance, small size and light weight.
13. High measuring accuracy, good repeatability and short measuring time.

### Technical Parameters:

1. The detection range is 1um-1cm
2. 5 million pixel microscope HD camera
3. The sample diameter is 4mm
4. The optical magnification is 100 times.
5. The image size is 2048\*1368 or 2592\*1944 pixels
6. The software supports segmentation of selected carbon black particles, which is convenient for splitting two conjoined carbon black particles or pellets; the software supports deletion of selected carbon black particles; two magnifications can be set to 70 times or 100 times to facilitate testing of different materials; with automatic Rating function, no need to manually select the level!
7. Instrument working power supply 220V/2A/50Hz
8. Computer configuration:  
Commodity name: Dell  
System: Windows 10  
Processor: Intel i3  
Chassis size: 10L or less  
Hard disk capacity: 1TB HDD  
Graphics: Integrated graphics  
Memory capacity: 4G  
Display size: 20-21.5 inches

### Configuration list:



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Professional high precision microscope	1set
5 million HD camera	1pc
Professional analysis software	1set
Glass slide	1box 50pcs
Micrometer scale	1pc
Utility knife	1pc
Forceps pliers	1pc
Clip	4pcs
computer	1 set
Slicer machine	Option
Hot oven	option

## Zhongli Introduction:

Zhongli Instrument Located in Dongguan, Guangdong, China. It is a collection development, research, production and sales of integrated lab testing machine.

Zhongli attaches great importance on the construction of independent R&D ability and technical force, and has already built up a professional work team possessing independent R&D ability in order to design and produce better products to meet customers' requirements. Our machines adopt advanced technology and have good quality with high detecting sensitivity, strong anti-interference ability, stable performance etc. Customization is available in Zhongli, and our engineers can design drawings for customers to meet special requirements, also we can design and install machines according to different production lines.

We adhere to the conception of "Customer First", regard meeting customers' requirements as a primary goal and contribute to providing perfect products and satisfying services to our customers.

## Thank you!