

## Carbon Black Dispersion (CBD)



### HC-3600 (polyethylene)

#### Overview

HC3600 Carbon Black Dispersion analyzer is a testing instrument for the dispersion of pigments or carbon black in polyolefin pipes, pipe fittings and mixed ingredients according to the international standard GB / T 18251-2000.

This instrument is based on HC-3600 software and corresponding to microscope featured. By measuring the size, shape and dispersion of carbon black particles, the internal relationship between these parameters and the mechanical properties, antistatic properties, moisture absorption properties and other macro performance indexes can be established.

HC3600 has a positive impact on the quality assurance, production process and new product research and development of plastic materials, and promotes the rapid improvement of the technical level of enterprises and industries.

#### Main features:

- 1、 The professional image analysis method is used to determine the dispersion grade of carbon black by computer with high detection accuracy.
- 2、 The particle size of target carbon black can be analyzed from micron to millimeter
- 3、 Equipped with professional microscope and 5 million CMOS image transmitter
- 4、 Single image can be saved. The image size can be 640 \* 480 1024 \* 768 1280 \* 1024 2592 \* 1944
- 5、 Rich image processing functions to meet the needs of various image processing
- 6、 The software can segment carbon black image automatically and manually
- 7、 The software can meet the requirements of local analysis
- 8、 Equipped with micrometer scale, it can calibrate the pixel size, and the software has the function of moving scale, which can measure the distance between any two points
- 9、 Customers can establish their own standard drawing library
- 10、 The output results cover the number, size and area of carbon black pellets, and can be output in the form of data reports and excel
- 11、 Provide image gray scale distribution diagram, particle diameter distribution diagram and particle size distribution diagram
- 12、 The report results include: sample name, standard name, original image, gray scale map, etc. The report output format is various, you can choose picture format or PDF format to save.
- 13、 The software tries out all kinds of mainstream operating systems and has good compatibility with win7 / win10 / WinXP, etc.

14、 With USB 2.0 data interface, it can adapt to a variety of acquisition devices (such as camera or digital camera).

**Technical Specifications:**

- 1、 Detection range 0.5um—1cm;
- 2、 Imaging resolution 2592 \* 1944 (5 megapixel CCD digital camera);
- 3、 Optical magnification 100 times
- 4、 Light source angle 30°
- 5、 Image size 640\*480, 1024\*768, 2048\*1536, 2592\*1944;
- 6、 Analysis time selection image size is different, slightly different;
- 7、 Working power supply of instrument 220V /2A/50Hz

**Applicable Standards:**

GB/T 18251-2000 Method for the determination of pigment or carbon black dispersion in polyolefin pipes, fittings and mixtures

GB/T 2951.41 General test methods for insulating and sheathing materials of cables and optical cables

GB/T 15558.1-2015 Buried polyethylene (PE) piping systems for gas - Part 1: Pipes