

cottonscope

A New Instrument for the Measurement of Cotton Maturity, Width and Fineness

棉检显微镜：测量棉花细度和成熟度的新型仪器

Fast, Direct and Accurate
快速，直接，准确



Cotton Cross Section 棉花横截面

✘ Immature 未成熟的



✔ Mature 成熟的



Birefringent crystal layer is visible with polarised light.

Immature fibres are weaker, cause neps and take up less dye producing uneven colour.

在偏振光下可见双折射结晶层；

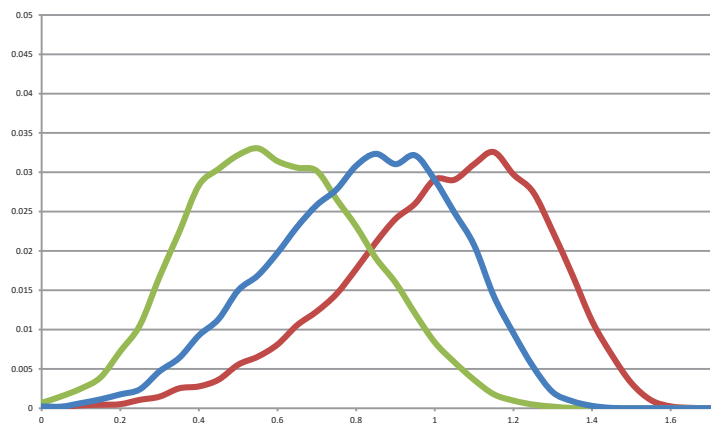
未成熟的纤维强力较低，易形成棉结，且因上染率低而造成染色不匀。

Cottonscope is a fully automated microscope that captures colour images of cotton snippets in water. Maturity ratio and fibre fineness is measured in 25 seconds. It combines the unique technologies of SiroMat and OFDA.

SiroMat is an automated version of the polarized light microscopy Standard Test Method (ASTM D1442-00) and was developed by CSIRO, Australia's premier research organization. OFDA is the world's leading image processing instrument for rapid, accurate measurement of animal fibres such as cashmere and wool. Over 3000 FDAs have been sold worldwide in the last 23 years.

棉检显微镜（Cottonscope）是一种可以完全自动化捕捉水中棉花短纤维彩色图像的显微镜。它可以在25秒钟之内完成棉花成熟率和纤维细度的测定。它结合了SiroMat和OFDA二者的独特技术。

SiroMat是由澳大利亚著名研究机构CSIRO开发的自动偏振光显微镜标准检测方法（ASTM D1442-00）。OFDA是世界领先级能通过图像处理快速准确测量动物纤维（如羊绒和羊毛）的仪器。在过去的23年里，已有300多台OFDA畅销世界。



Histogram of three measured cotton samples of Maturity Ratio 0.57, 0.79, 1.04.

三种被检测棉花样品成熟度直方图。

Fineness

is proportional to the cross sectional area of the fibre and is expressed in mTex (microg/m). Finer fibres give more even yarn and create fabrics with softer feel.

细度

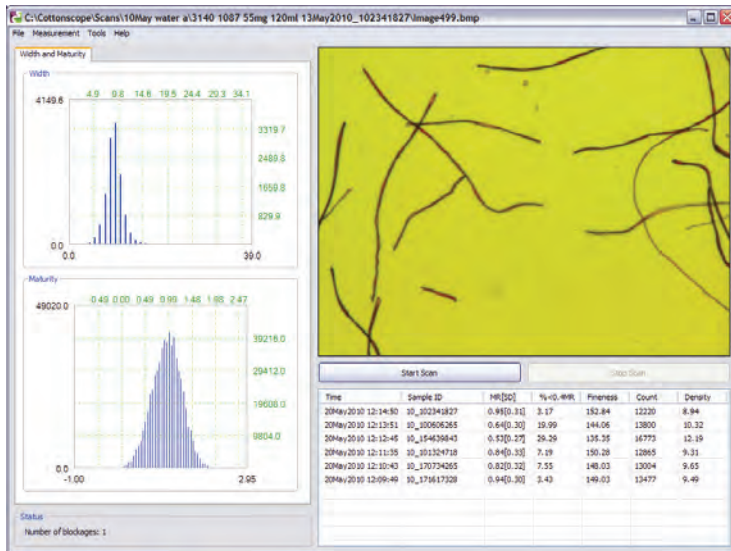
细度与纤维的横截面面积成正比，用mTex（豪特克斯=微克/米）表示。纤维越细，纺成的纱线越均匀，织物手感越柔软。

Advantages over Micronaire

Micronaire is unable to distinguish between fine, mature fibres and coarse, immature fibres. It combines both the fineness and maturity measurement into a single number whereas Cottonscope is the first instrument that separates the two measurements. Cottonscope also provides the distribution of maturity.

优于马克隆尼气流式纤维细度测试仪的特性

马克隆尼气流式纤维细度测试仪无法区分细的成熟纤维与粗的未成熟纤维。因为它是将细度和成熟度的测定合在一起，只用一个数字表征。而棉检显微镜是第一种能将这两种测试分开的仪器，并能提供成熟度分布信息。



Measurement Procedure

1. 50-60mg of snippets are cut from samples using a 0.7mm fibre guillotine
 2. snippets are dropped into the measuring bowl
 3. Cottonscope measures the snippets in 25 seconds
 4. bowl is drained and ready for the next measurement
- See a video of the procedure at www.cottonscope.com

测试步骤

1. 用0.7mm纤维剪切刀从样品中切下50~60毫克短纤维
 2. 将短纤维放入测量槽中
 3. 棉检显微镜将在25秒内完成测试
 4. 将测量槽清空，以备下一个测试
- 请打开下面的链接观看测量步骤的视频演示 www.cottonscope.com



A New Instrument for the Measurement of Cotton Maturity, Width and Fineness

Included Components

- computer
- cottonscope
- guillotine
- weighing balance
- accessories pack

随机附件

- 计算机
- 棉检显微镜
- 剪切刀
- 称量天平
- 配件包

Specifications

- Windows 7 OS
- dual core CPU, 1GB RAM
- 25 seconds measurement time for 2000-7000 cotton segments
- voltage 24 DC
- operating power 8W (not including PC)
- height x width x length 270mm x 220mm x 400mm
- weight 6kg

说明

- Windows 7操作系统
- 双核CPU, 1GB内存
- 25秒内可以测量2000-7000个棉花片段
- 电压: 24DC
- 运行功率: 8瓦 (不包括电脑)
- 高x宽x长: 270毫米x 220毫米x 400毫米
- 重量: 6公斤



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