



CRC

for

Premium

Quality

Wool

Optical Fibre Diameter Analyser: Measurement of Fibre Diameter

Produced for the CRC for Premium Quality Wool undergraduate program by;
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Introduction to OFDA

- **History**
 - introduced 1991
 - used in 22 countries
- **Capabilities**
 - raw wool to fabric measurement
 - cashmere, mohair, alpaca, synthetics
- **Measurement**
 - diameter
 - medullation
 - curvature
 - **ALONG** fibre diameter
 - fibre cleanliness

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OFDA measurement system

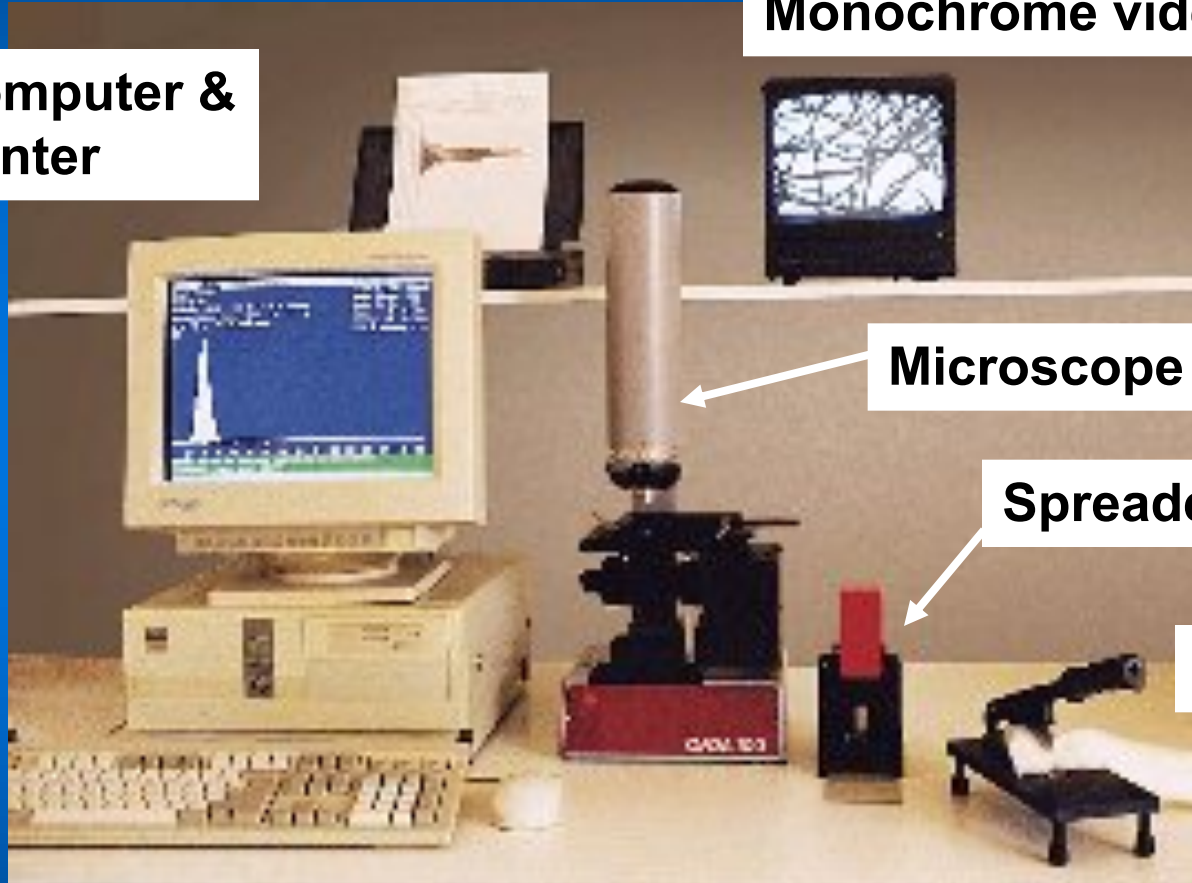
Computer & printer

Monochrome video monitor

Microscope & video

Spreader

Guillotine



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Standard

- **IWTO-47-95**
 - Measurement of the mean and distribution of fibre diameter of wool using an Optical Fibre Diameter Analyser (OFDA)
- **Accepted as full standard at IWTO in 1995**
 - certified and applied in wool trading contracts.

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Operating principles

- cut sample into 2mm snippets
- spread fibre snippets onto open glass slide
- load slide onto OFDA microscope stage
- follow computer software instructions



Measurement points
are shown as lines crossing fibre

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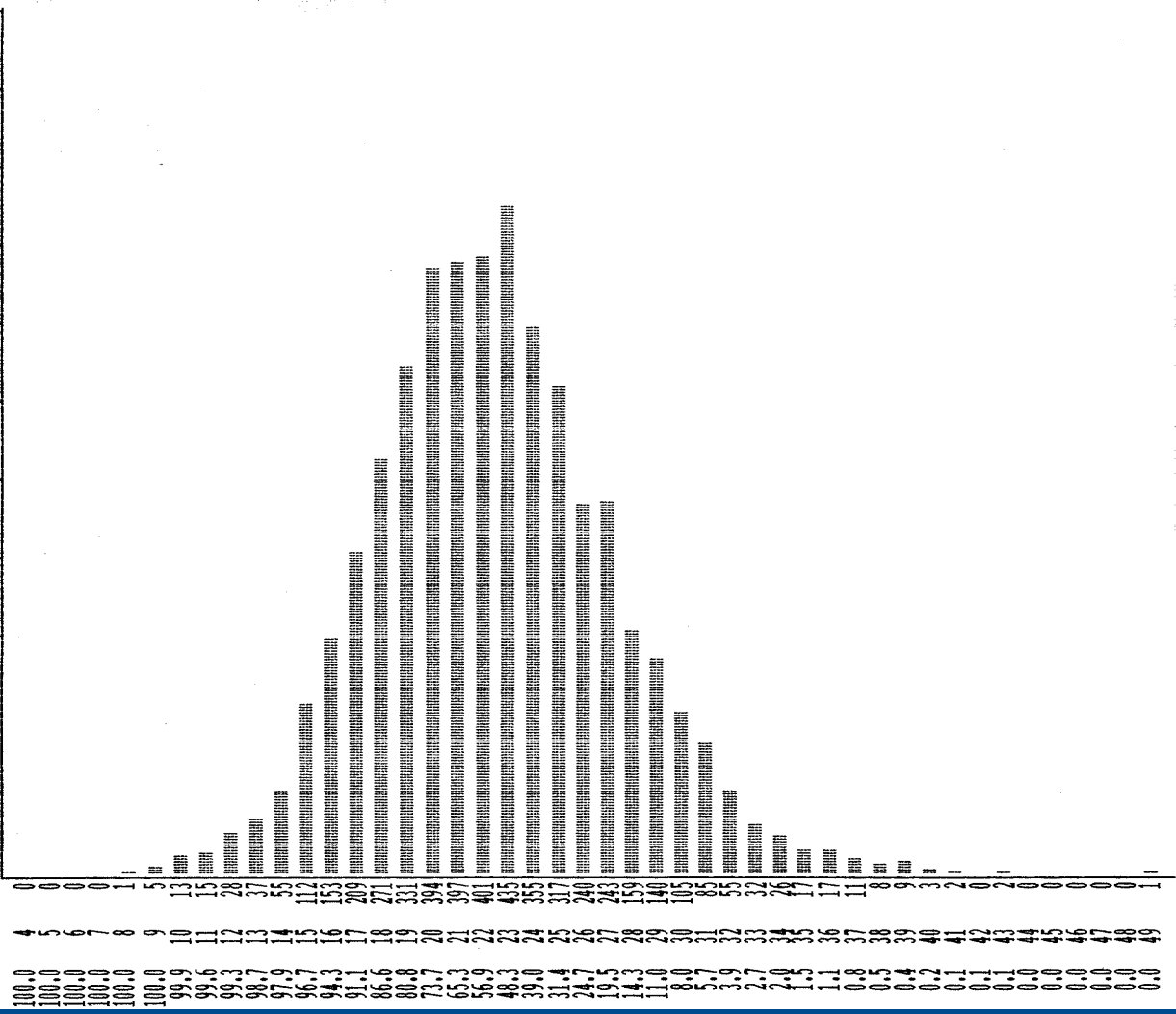
Wool



OFDA histogram

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Date : 29Jul99
 Sample ID :
 Description : OFDA
 Lot/Client :
 Operator :
 8.0 % of fibres are ≥ 30 u.
 Curve= 83.7[67] deg/mm
 OFDA131:2.11 Cal: D=5.2630*WH -2.62, wV= 1.4602*wH+ 0.09, DkFlash= 79.0
 Mean = 22.56 u
 SD = 4.82 u
 CV = 21.3 %
 Sample size = 4684
 5% of fibres 8.8 u above mean.
 Curve number= 1525





Further Information

- <http://www.ofda.com>

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