

FLEECE MEASUREMENT

Sirolan Laserscan

Laser technology has wide applications in many scientific fields and is now being applied to the measurement of fiber diameter. Unless specifically requested, all fleece testing is conducted on LASERSCAN. The Commonwealth Scientific and Industrial Research Organization (CSIRO)'S expertise in this field has led to the development of SIROLAN LASERSCAN for producing accurate and precise measurements of mean fiber diameter and diameter distribution, with minimal sample preparation.



The additional information, including diameter distribution, provides wool growers with useful information on the evenness of individual fleeces at flock selection time.

What is the process?

Firstly, mid-side samples are scoured to remove excess grease and dirt, after which the sample is dried and then allowed to condition in a standard atmosphere (20°C and 65% Relative Humidity). Fibre snippets of approximately 2mm in length are then cut using a minicoring machine, especially designed for the task. The fibre snippets are placed in Laserscan's pre-measurement bowl where they are dispersed in a transport liquid and then flow through to the measurement cell. In the cell fibres intercept the laser beam and changes in the beam's intensity are converted to diameter readings by the computer.

When the appropriate number of snippets have been measured, the Laserscan's computer calculates:

- I. The average fibre diameter of the sample; and
- II. Three measures of fibre diameter distribution:
 - Standard deviation
 - Coefficient of variation
 - Percentage of fibres less than 30 microns (comfort factor)

When the distribution of fibre diameter is important to you as a wool grower, SIROLAN LASERSCAN provides cutting-edge technology to provide this information quickly and accurately.

Services available

Mean Fibre Diameter (MFD only): also includes Standard Deviation (SD), Coefficient of Variation (CV) and comfort factor.

MFD plus Washing Yield: all of the above plus a “washing yield”, i.e. the yield of product scouring but before any processing occurs to remove the vegetable matter (VM).

Tickets and Sample Bags: supplied free of charge.

Types of Report Presentation Available:

- Sheep Number Order
- Fibre Diameter Order
- Yield Order
- Individual histogram Fibre Diameter (additional fee per fleece)

Results will automatically be presented in sheep number order unless otherwise specified. Only one report type is included as part of the standard group price. (There is a small charge for each additional report).

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