



A precise characterization of the abrasion properties of single fibers in the wet state enables an estimation of their fibrillation tendency. Therewith, the strength of the fibers in further processing and the haptic properties of end products can be predicted.

With Lenzing Instruments **DELTA 100**, up to 20 single fibers are tested simultaneously for their abrasion characteristics in wet conditions. A fully automatic test procedure ensures for reliable and reproducible results without any subjective influence of the operator.

During the test, either a shaft covered with a predefined viscose hose or a sandblasted metal shaft rotates with constant speed, whereby the hose is constantly moistened with water.

A simultaneous axial movement of the shaft prevents groove to develop. The wet abrasion level is determined by the number of revolutions required until the fiber tears.

The titer dependent measurement results of the number of revolutions until breakage are calculated and presented in the software in consideration of the titer.



Scope:

Automatic measurement of the abrasion of single fibers in wet conditions.

Method:

Up to 20 single fibers are fixed with a defined angle and a pre-tension weight over a shaft. During the measurement, the shaft rotates at constant speed and at the same time, it is being permanently moistened. The wet abrasion level is determined by the number of revolutions, with which the fiber tears.

Results:

The measured values are statistically evaluated and displayed in the software. Since the measured values are titer-dependent, it is necessary to consider the titer in order to get an exact result. If not, the target titer is taken into account.

Number of samples:

Max. 20

Minimum fiber length:

Scrubbing angle 100°: 25.5 mm

Scrubbing angle 0°: 17.5 mm

Fiber pretensioning:

With Vibroclips

Flow rate:

5.6 ml/min

Evaluation and control unit:

Personal Computer, Keyboard, Windows® operating system

Interface:

Ethernet

Scrubbing shaft:

Effective length: 340 mm

Diameter: 10 mm

Speed: 100 - 500 rpm

Oscillating speed: 10 mm/min

Angle between fixed fibers and shaft:

Before meas.: -10°

During meas.: 0 - 100°

Material:

Stainless steel; surface sand-blasted

Wetting:

Channel below the shaft; water supply by external tube pump

Power supply:

230/115 VAC ± 10 %

50/60 Hz, 130 W

Dimensions:

Height: 260 mm

Width: 820 mm

Depth: 430 mm

Weight: 50 kg

Optionally available:

- 2nd clamping plate for additional 20 fibers
- Additional clamping plate holder
- OPC UA interface

Technical data and pictures are subject to change.