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K100SF with Autoloader

Measuring contact angles on single fibres

Fully automatic for up to 50 fibres



KRÜSS GmbH and DIA-STRON Ltd. have developed a system with fully automatic sample changing for contact angle measurements on series of single fibres.

The single-fibre Tensiometer K100SF from KRÜSS works in cooperation with the ALS1500 Sample Loading System from DIA-STRON. This arrangement allows:

- **Fully automatic wetting measurement series on single fibres**
- **Measurement with the high-precision tensiometer K100SF**
- **Sample changing for up to 50 fibres with the ALS1500 Sample Loading System**
- **Comfortable evaluation and data management with the time-proven LabDesk software**
- **Optionally: automatic determination of the wetted length of each single fibre**

KRÜSS

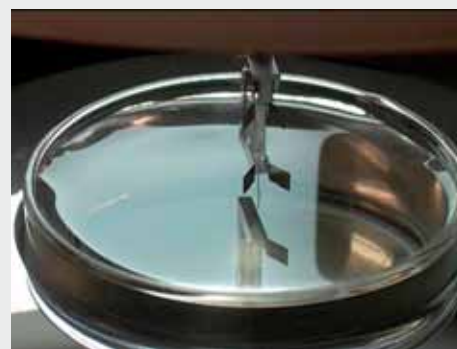
Fully automatic wetting measurement series on fibres

The tensiometer K100SF is equipped with a highly accurate force measurement system. This enables the extremely small wetting forces of a liquid on a single synthetic or natural fibre to be measured and the contact angle calculated from them. The LabDesk tensiometer software ensures a completely computer-controlled measuring procedure. As a result of the cooperation the samples no longer require to be changed manually.

The up to 50 samples are first placed in the storage cassette. The series measurement is planned in the LabDesk tensiometer software - thanks to the software module for batch contact

angles a matter of seconds. The sample loader removes the samples in succession and places them in the sample receiver of the Tensiometer K100SF, which then takes over and determines the contact angle fibre for fibre.

The wetted length of each fibre can also be determined automatically. This requires an additional laser-scan micrometer, which measures the diameters of all the fibres in the storage cassette – with an accuracy $\leq 1 \mu\text{m}$. The results are transferred to LabDesk and used for the subsequent contact angle measurement series.



Contact angle measurement on a single fibre



K100SF with sample loading system

Technical data

Measuring range:	0 - 180°
Sample fibres:	
Number:	up to 50 in one cassette
Diameter:	> 20 μm
Weight measurement:	
Maximum load:	6 g
Resolution:	1 μg
Data rate:	50 Hz
Calibration:	automatic
Position:	
Movement range:	120 mm
Resolution:	0.1 μm
Temperature range:	-10°C ... 50°C

We reserve the right to make technical alterations



<http://www.kruss.de>

KRÜSS GmbH
Wissenschaftliche Laborgeräte
Borsteler Chaussee 85-99a
D-22453 Hamburg
Tel: +49 - 40 - 51 44 01 - 0
Fax: +49 - 40 - 51 44 01 - 98
E-Mail: info@kruss.de

KRÜSS GmbH
38/40 Avenue Jean Jaurès
F-91120 Palaiseau
Tel: +33 - 1 - 60 14 94 94
Fax: +33 - 1 - 60 14 95 48
E-Mail: info@kruss.fr

KRÜSS USA
1020 Crews Road, Suite K
Matthews, NC 28105
Tel: +1 - 704 - 847 8933
Fax: +1 - 704 - 847 9416
E-Mail: info@kruss-usa.com

Measuring method

- Contact angle on single fibres

Optional accessory

- Optic measurement of fibre diameter
- Temperature control