SDL ATLAS®
TEXTILE TESTING SOLUTIONS

DryRate® 201

Drying Rate Tester - Heated Plate Method

Precision Drying Rate Measurement Made Simple

The popularity of moisture management products aimed at making the wearer feel dry and comfortable is soaring. State-of-the-art measurement and analysis of the drying characteristics of fabrics in the textile sector is essential.

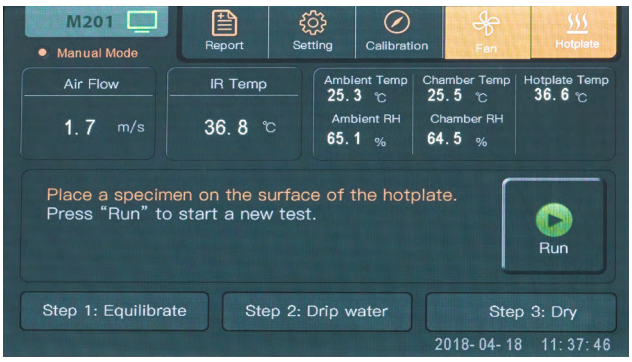
DryRate 201 is a fully automated and advanced instrument with a heated metal plate, which simulates human skin starting to perspire at 37 ° C, that determines the drying rate based on evaporation rate from the fabric.

The instrument comes with a touch screen controller for setting parameters, monitoring testing status, and reading final results. For more detailed analysis, testing data can be transmitted to a computer for real-time test curve display.

DryRate 201 is precisely designed to satisfy AATCC Test Method 201: Drying Rate of Fabrics: Heated Plate Method.

Testing Principle

Based on the principle of a wetted fabric against a heat source with air flow, the evaporation of water will remove heat to reduce the surface temperature. Detecting the temperature of the fabric surface accurately determines whether the textile has become completely dry.



Automatic Mode

For the fully automated testing mode, the operator simply places the sample in the test area, and the instrument will automatically run the test including water dispensing and generate the results once completed. The operator can change the amount of water and air flow through the testing parameters.

Manual Mode

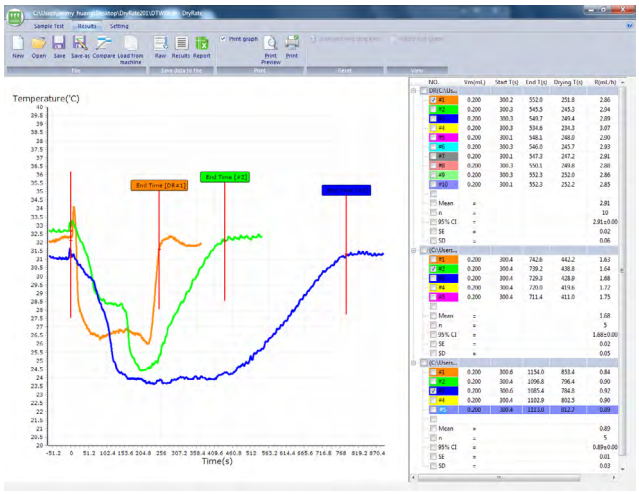
The manual test mode allows for the same change of air flow through the test settings with the added ability to perform manual water dosing as described in the AATCC 201 Test Method.

Manual water application

Test Results

All test results are included in test reports which can be displayed either directly on the instrument screen or on a connected computer for further analysis and comparison to previous tests.

Fabric	Start Time (s)	End Time (s)	Test Time (s)	Volume Max (ml)	Drying Rate (ml/h)
1	306.0	580.0	274.0	0.20	2.62
2	306.0	582.0	276.0	0.20	2.60
3	306.0	591.0	285.0	0.20	2.52
4	306.0	593.0	287.0	0.20	2.50
5	306.0	590.0	284.0	0.20	2.53



SDL ATLAS

DryRate Tester
AATCC 201

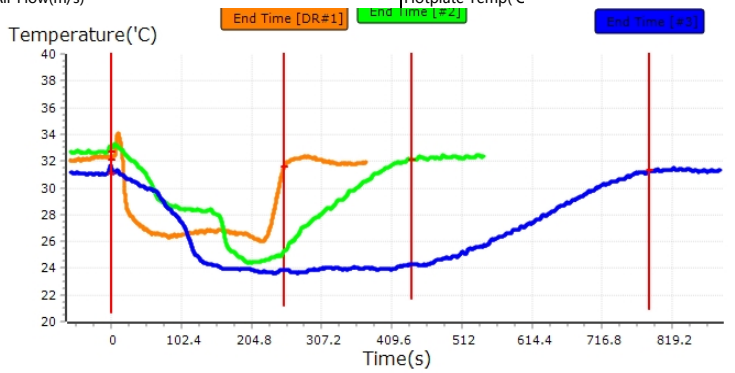
Company	Operator	Date

Test Information M201

Description

DryingRate	n	Mean	95% CI	SE	SD
	3	1.81	1.81±1.54	0.57	0.98

Chamber Temp('C)	Chamber HR
Ambient Temp('C)	Ambient HR
Air Flow(m/s)	Hotplate Temp('C



Test Result

Sample	Volume(mL)	Start Time(s)	End Time(s)	Drying Time(s)	Drying Rate(mL/h)
DR#1	0.200	300.2	552.0	251.8	2.86
#2	0.200	300.4	739.2	438.8	1.64
#3	0.200	300.6	1085.4	784.8	0.92

Features

- Operate as a stand-alone unit and via a computer
- Automatic and manual selection of water dosing
- Real-time display of ambient and chamber temperature & humidity on touch screen
- 7-inch capacitive touch screen controller to instantly set parameters and monitor test status and results
- Test data can be transmitted to the computer for real-time test curve display with automatic report
- Closed-loop control system (heated metal plate and air flow) secures consistent test conditions
- Accurate water volume determined by the built-in precision water pump
- Built-in high precision anemometer (air flow sensor) and infrared thermocouple probe
- Specialized software calculates the end time and drying rate R of each test
- Multiple test-curves overlay display for efficient comparisons of fabrics

The DryRate 201 testing conditions are constantly monitored by the built-in anemometer (air flow sensor) and infrared thermocouple probe.

Standards

AATCC 201

Product Specifications

Size (Width x Depth x Height)	570 mm x 435 mm x 345 mm
Weight	30 kg
Heated Plate Size (Width x Depth)	305 mm x 305 mm +/- 5 mm
Heated Plate Temperature	37 +/-0.3 °C
Air Flow	0.5 - 2.0 +/- 0.3 m/s
IR Thermocouple Probe Temperature Range	15.0 - 50.0 +/- 0.1 °C
Water Dosing	0.200 +/- 0.003 ml, up to 1.00 ml
Power Requirements	110/230V 50/60 Hz 2A

Applications

- Quality control in fabric and garment manufacturing
- Research and development of new functional fabrics and garments
- Evaluate all types of fabrics (knit, woven, and non-woven)
- Assess both production fabric and end products

Ordering Information

- 108191 DryRate 201

Providing Confidence

For over 60 years, the SDL Atlas companies have been providing confidence in standard based testing through expertise and global partnering. Our customers can be assured that they are making informed decisions based on accurate test results.

SDL Atlas experts work closely with standards committees and retailers on development of standards. Our engineers develop instruments to meet these standards. Our service team calibrates the instruments to exacting UKAS and internal standards. High quality consumables that are consistent from batch to batch are also produced and distributed by SDL Atlas.

Test Materials

Test Materials are a critical part of many textile tests. SDL Atlas produces and distributes a complete line of test materials. Each batch is thoroughly tested to ensure conformity and consistency from batch to batch.

Our test materials offerings include:

- Multifiber
- Cork Liners
- Abradents
- Phenolic Yellowing
- Detergents
- Ballasts
- Crocking Fabric

Calibration & Service

- UKAS calibration
- ISO calibration
- Service support
- Factory trained representatives
- SDL Atlas service technicians

SDL Atlas is a UKAS accredited calibration laboratory No. 0688. With fully trained technicians located in Europe, Asia, and North America, we are prepared to support our customers in maintaining their investments and their confidence in their testing instruments.

Providing confidence in standard based testing through expertise and global partnering

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