

MMT®

Moisture Management Tester

Measures, evaluates and classifies the dynamic liquid transport properties of performance and technical fabrics.



The MMT® (Moisture Management Tester) measures, evaluates and classifies the dynamic liquid management properties of fabrics — testing capabilities that go beyond standard methods and are essential for engineered, performance and technical textiles. AATCC Test Method 195 and GB/T 21655.2 are both based on the MMT®.

A sample is placed horizontally in the instrument between the upper and lower sensors, each made of concentric rings of pins. A test solution representing perspiration is dropped onto the centre of the upper (skin-side) surface, and the resulting changes in electrical resistance are measured and recorded as the solution moves through and across the fabric.

120 s

Test duration

7

Fabric types identified

2

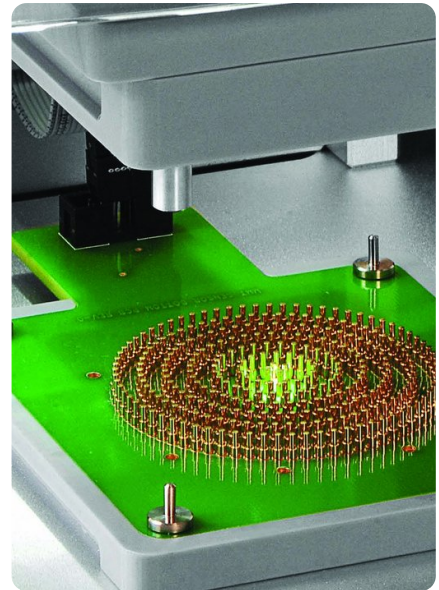
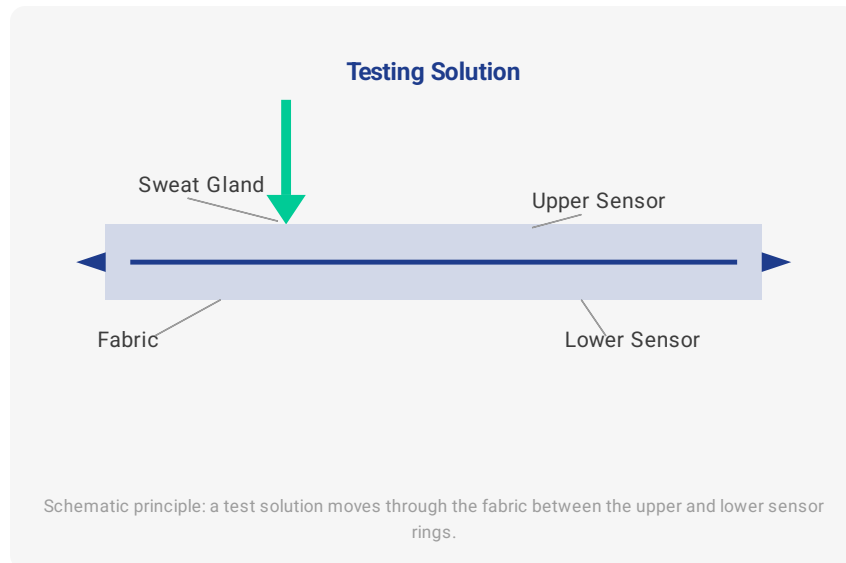
International standards

50%

Max. fabric stretch (optional)

How It Works

To measure the dynamic liquid transport properties, a sample is placed horizontally in the instrument between the upper and lower sensors. These sensors are made of concentric rings of pins. A test solution, representing perspiration, is dropped onto the centre of the upper (skin-side) surface of the sample. As the solution moves through and across the fabric, the resulting changes in electrical resistance are measured and recorded.



Concentric ring sensor – developed and patented in coordination with the Hong Kong Polytechnic University.

Stretch Fabrics



The optional Stretch Fabric Fixture provides more accurate testing for fabrics with stretch properties, such as those used in athletic clothing and underwear. The percentage of stretch is set on the fixture's handle, up to 50%.

Once set, the sample is clamped into place with a clamping ring, removed from the fixture, and placed directly onto the MMT®'s test area for moisture management testing.

Patent registration numbers (pending): China 202010449984.7, 202020893698.5

Moisture Management Performance Profile

One 2-minute test gives a comprehensive profile of a fabric’s performance, producing the following data:

- Overall Moisture Management Capability
 - Accumulative One-Way Transport Capability
 - Wetting Time for top and bottom surfaces
 - Absorption Rate for top and bottom surfaces
 - Max Wetted Radius for top and bottom surfaces
 - Spreading Speed for top and bottom surfaces
- MMT® can identify 7 types of fabrics**

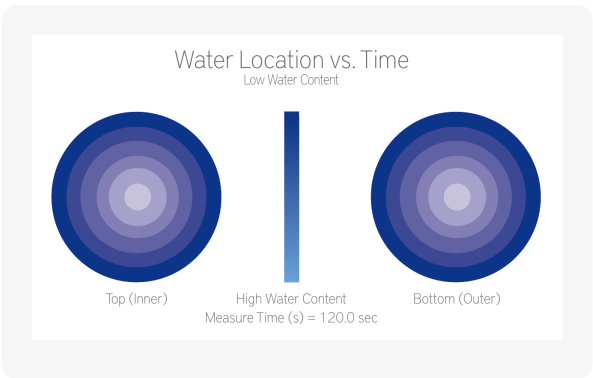
 - Waterproof fabric
 - Water repellent fabric
 - Slow absorbing and slow drying fabric
 - Fast absorbing and slow drying fabric
 - Fast absorbing and quick drying fabric
 - Water penetration fabric
 - Moisture management fabric

The MMT® is the only instrument on the market that can precisely calculate the liquid management properties of performance and technical fabrics.

SDL Atlas

Example Test Output

The example below shows the output of a single 120-second test for a fast absorbing and quick drying fabric.

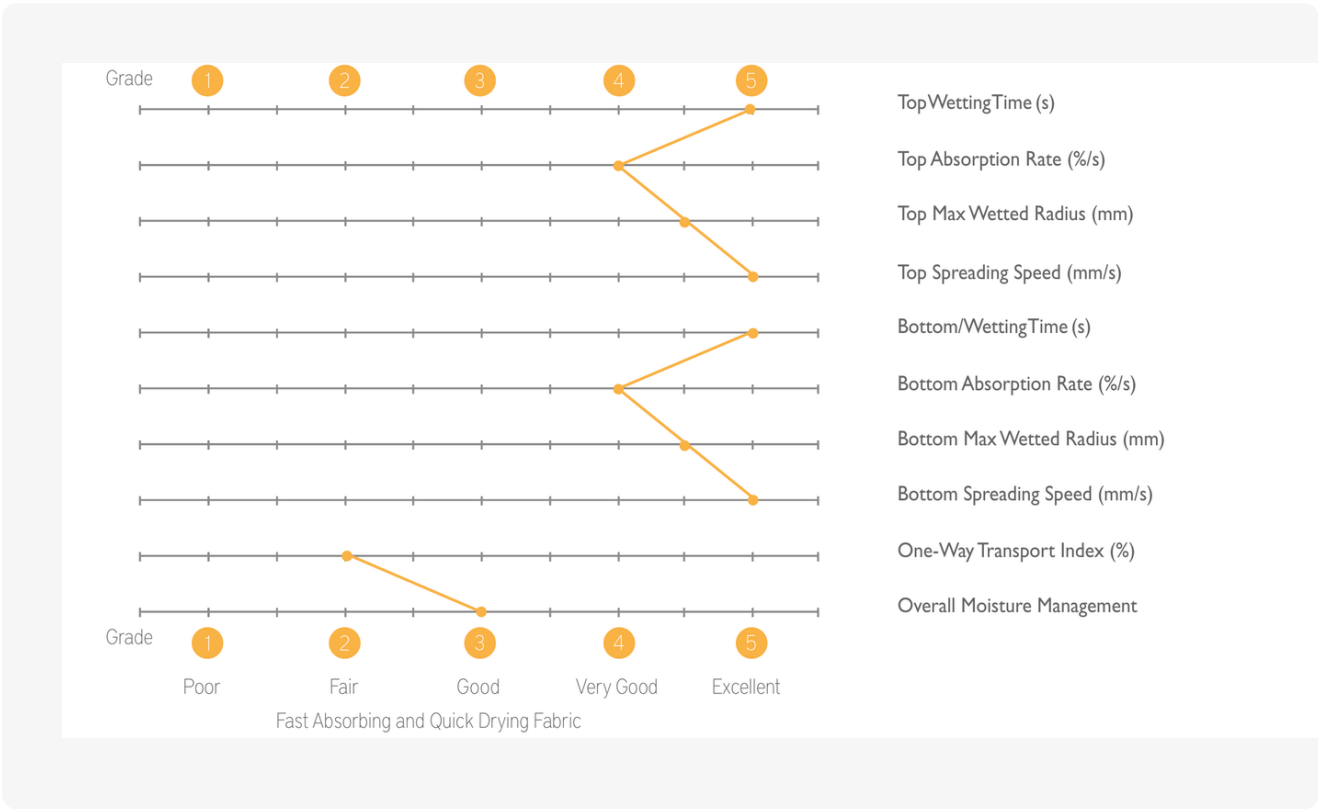


Water location vs. time — low to high water content, measured over 120 seconds.

	Top Surface	Bottom Surface
Wetting Time (s)	2.953	3.046
Absorption Rate (%/s)	71.8323	68.7287
Max Wetted Radius (mm)	20.0	20.0
Spreading Speed (mm/s)	4.232	4.1326
One Way Transport		-25.8368
Test Description	MMT	

Fingerprint of Moisture Management Properties

The fingerprint chart below plots the example fabric's grade — from Poor to Excellent — against each of the MMT®'s measured parameters, in line with AATCC TM-195. It gives an at-a-glance visual summary of a fabric's complete moisture management performance.



Fingerprint of Moisture Management Properties (AATCC TM-195) — example grading for a fast absorbing and quick drying fabric.



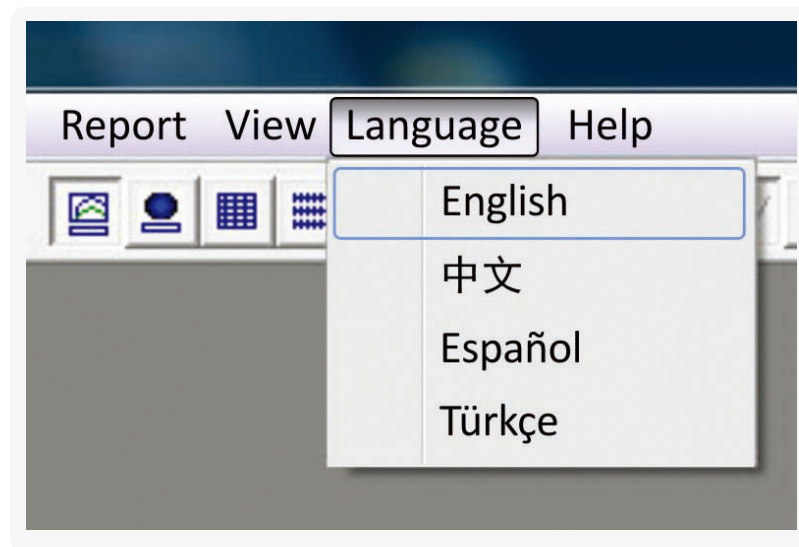
Instrument Features

The MMT®'s metal cabinet is durable, with an open style that improves access for sample handling and lets the operator remove the sensors for routine cleaning and maintenance.

The upper sensor and protective translucent door move into position automatically at the start and end of each test. A centre positioning indicator helps the operator place the sample precisely, improving repeatability and reproducibility.

Software updates make the MMT® more accessible internationally, with interface options in English, Spanish, Turkish and Chinese, plus grading tables for international test standards for quick, reliable analysis.

Patent registration number: China ZL 2014 3 0428922.3, US 6,499,338 B2



Multi-language interface: English, Chinese, Spanish and Turkish.



In practice

The MMT® provides much greater confidence in moisture management testing than more traditional tests.

Standards

AATCC 195-2017

GB/T 21655.2-2019

Product Specifications

Size (W x D x H)	300 mm x 420 mm x 545 mm
Weight	27 kg
Interface	USB 1.1 / 2.0
Power Supply	110V 60Hz 1A or 230V 50Hz 0.5A
Operation Temp & RH	16°C to 29°C, 80% maximum (non-condensing)
Pump On Time	20 s
Test Solution	Conductivity 16 mS ± 0.2 mS

Applications

- Quality control in fabric and garment manufacturing
- Research and development of new functional fabrics and garments
- Classification of fabrics according to dynamic liquid transport properties
- Ranking of apparel fabrics by comfort factors related to moisture management

Standard Accessories

- MMT®
- Conductivity Meter with Calibration Solution (batteries not included)
- Conductive Rubber Mat
- Standard Testing Solution
- Spare Silicon Tube
- Sentinel Software Key
- USB Cable
- USB Drive for Instruction Manual and MMT® Software