

織物水份吸收測試儀 Moisture Management Tester

加強紡織質量管理的科技
Advanced quality control technology for textile industry

專利申請編號及國家：09/811,829 (美國)

特色與優點

快速，敏銳和精確地測定織物液態水控制能力

應用

布料和服裝生產廠家可把 MMT應用於：

- 質量管理與研究開發的工具
- 能區分下列四大類的織物：
 1. 優越液態水控制織物
 2. 快速吸水和快乾織物
 3. 慢速吸水和慢乾織物
 4. 不吸水/防水織物

獎項

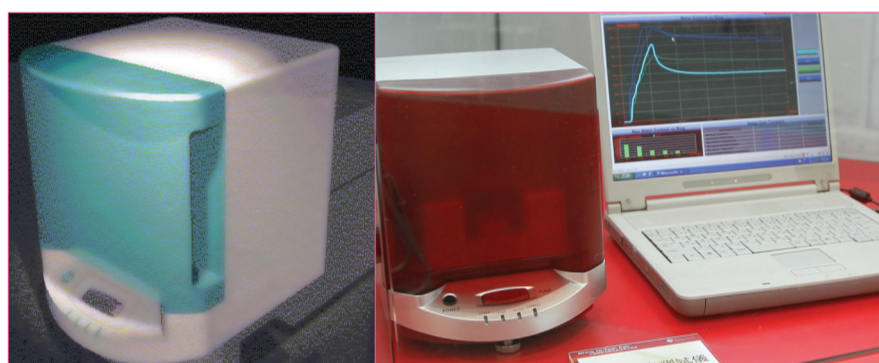
美國AATCC已接受申請成為測視水份吸收的標準

織物水份吸收測試儀(MMT)是一台大型開發用於測試紡織品如針織布料或梭織布料液態水控制能力的儀器。該領先世界儀器包含有上下兩個由同心結構的水份感測器，被測的織物就放在這兩個感測器之間。

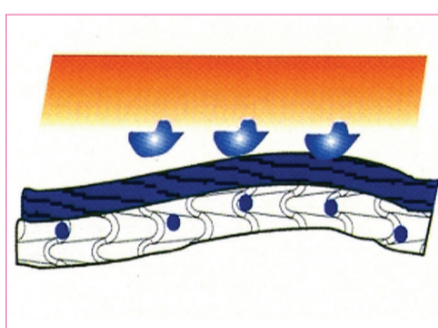
一定量的預先配製的溶液（模擬汗液）被注在被測試樣的上表面，然後測量溶液在織物三個方向擴散：

- 在織物上表面向外擴散的過程
- 從上表面向下表面傳遞的過程
- 在下表面向外擴散並蒸發的過程

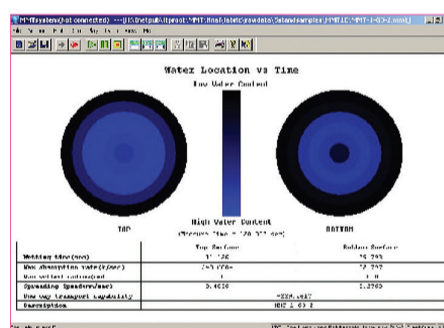
MMT被設計成感知，測量，記錄液態水在織物中三個方向的傳遞特性。一系列的指標被用來定義和計算被測樣品的液態水控制能力。



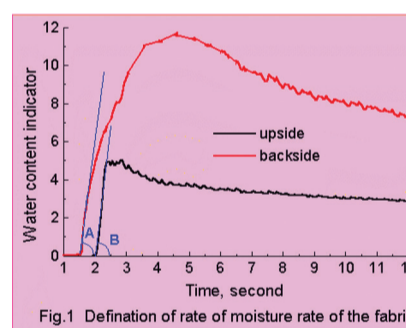
織物水份控制測試儀(MMT)主機
Moisture Management Tester (MMT) main unit



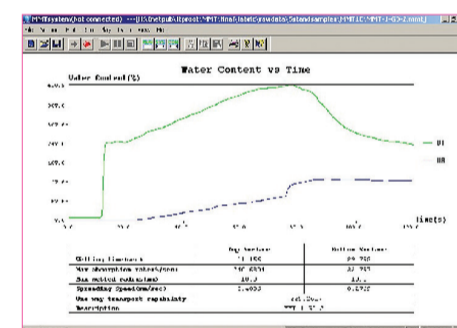
液態水吸收過程
Liquid absorption process



試樣兩面濕潤區域
Wetted areas on the fabric two surfaces



吸收率與濕潤時間
Absorption rate and wetting time



試樣兩面含水量
Water contents on the fabric two surfaces

The Moisture Management Tester (MMT) developed by the PolyU is an equipment to test the liquid moisture management capability of textiles such as knitted and woven fabrics. This world leading instrument consists of upper and lower concentric moisture sensors, where the fabric under test is placed in between these two sensors.

A pre-defined amount of test solution (synthetic sweating) is introduced onto the upper side of the fabric, then the test solution will transfer in the materials in three directions:

- Spreading outward on the upper surface of the fabric
- Transferring through the fabric from the upper surface to the bottom surface
- Spreading outward on the lower surface of the fabric and then evaporate

MMT is designed to sense, measure and record the liquid moisture transport behaviors in three multi-directions. A series of indexes are defined and calculated to characterize the liquid moisture management performance of the test sample.

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Special Features and Advantages

Fast, quick and accurately characterizes the liquid moisture management behavior of textiles

Applications

For textile and garment manufacturers, MMT is best for:

- Use as quality control and R&D tools
- Distinguishing four major types of fabrics as follows:
 1. Good liquid moisture management fabric
 2. Quick-absorb and quality-dry fabric
 3. Slow-absorb and slow-dry fabric
 4. Non-absorbent and/or water proof fabric

Award

Accepted as American Association of Textile Chemist and Colorist (AATCC) standard proposal