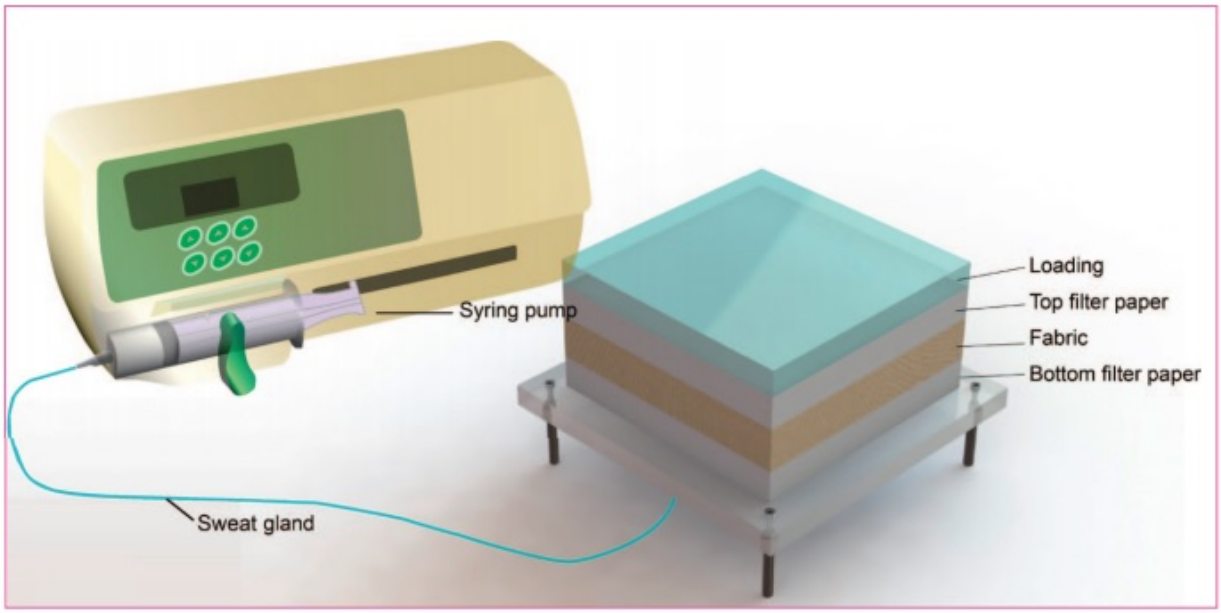
Directional water transport tester for fabrics

September 30 2016



Experimental set up of the Directional Water Transport Tester. Credit: PolyU

This Directional Water Transport Tester(DWTT) is a sensitive, accurate and reliable instrument for fabrics' water absorption and transport measurements developed by researchers at The Hong Kong Polytechnic University. DWTT's measurements are based on gravimetric and image analysis of water absorbed by a fabric. Then it can trace the direction of water spread and measure the amount of water transported on the skin. The DWTT can release water continuously and controllably to simulate different sweating levels. The DWTT measurement is fast and cost-effective. With this instrument, textile industry can characterize fabrics

efficiently. It helps product developers to select suitable fabrics for different garments.

Special Features and Advantages

- Capable of simulating the sweating condition under different metabolic levels
- Capable of tracing the direction of water transport
- Possible to differentiate the amount of water left on skin when sweated
- Versatile in terms of the types of fabrics could be tested
- Possible to investigate wicking within a clothing ensemble

Applications

- Measurement of water absorption and transport properties of fabrics under different sweating levels
- Product development of sportswear, medical textiles and hygiene products

Provided by Hong Kong Polytechnic University