

# LEADING LABORATORY IN FUNCTIONAL TEXTILE TESTING



Drying Time  
Drying Rate  
Air Permeability  
Coolness by Touch  
UV Protection

Wrinkle Free or Easy Care  
Stretch & Recovery



Antifungal Test  
Antimicrobial  
Insect Repellency



Water Resistance  
Water Repellency  
Water Vapor Transmission

*"Committed To Quality"*

**fiti** FITI Testing &  
Research Institute

# Advanced Laboratory in Functional Textile Testing

## “Why are we inundated with marketing claims of various performance capabilities?”

The demand for functional apparel has increased in accordance with advancements in society and technology. More and more people are opting to lead active lives, leading to an increasing need for garments with the combined functions of water-resistance and moisture-permeability, and these performance capabilities are loudly advertised in various forms of media.

Because sports are part of our daily lives, it is not difficult to see marketing claims insisting that special technologies have been adopted to keep you comfortable under any conceivable circumstance. Another variation of such a claim is that a stain-repellant finish is applied to the product for your convenience. It is apparent that the media is inundated with marketing claims catering to an increasing demand for functional clothing.

How do consumers know if the product is capable of performing the specific functions as claimed by retailers and brands?

## FITI's technical expertise contributes to development of accurate assessment method

To answer the question above, accurate assessment methods are initially made for a specific functional claim, which is followed by evaluation by special equipment and highly trained technicians. Currently, most functional characteristics are assessed with internationally recognized standards such as ISO and AATCC. In some cases where industry standards are not available, private standards – in-house test methods often developed by retailers or labs – are being used. However, these private standards must be replaced by more standardized and accurate test methods. With this in mind, FITI developed ISO 13029: 2012 '*Textiles – Determination of Drying Rate in Dynamic State by the Modified Sweating Guarded-Hot Plate*' in order to upgrade the existing drying rate test developed by a sportswear retailer. This ISO method effectively simulates the results of moisture forming on the skin, soaking to the garment surface, and finally drying.



# FITI Leads the Way in Functional Textile Testing

## FITI's full range of assessment capabilities protects all interested parties

Objectively assessing the claimed functions of products protects the interests of consumers and manufacturers alike, the latter having invested much in the research and development of the product.

Functional characteristics in textile products can be separated into four categories: Comfort, Convenience, Health, and Safety. Under each category, there is a specific set of test parameters to assess distinctive functional characteristics, such as Hygroscopic Heat Generation, Deodorization Test, and Soil Repellency. At FITI, all of these capabilities can be assessed in one stop by highly talented and experienced technicians with a full range of state of the art testing equipment. Listed below are our full functional textile testing capabilities:

### Comfort

- Water Vapor Resistance
- Water Vapor Transmission
- Drying Time
- Drying Rate
- Antistatic Test
  - Triboelectricity
  - Half-life
  - Surface resistivity
- Water Resistance
- Thermal Resistance & Evaporative Resistance with Mannequin
- Hygroscopic Heat Generation
- IR (Infrared) Thermal Test
- Coolness and Warmth by Touch
- Air Permeability
- Thermal Resistance

### Convenience

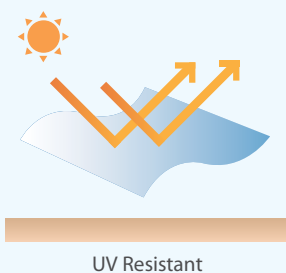
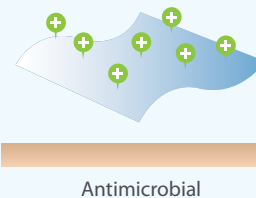
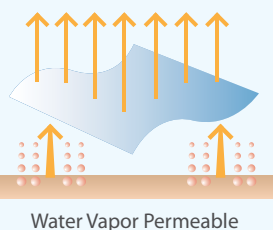
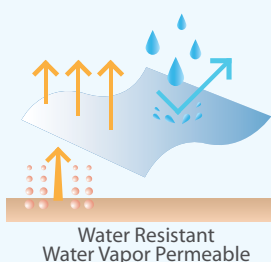
- Wrinkle Free or Easy Care
- Soil Repellency
- Water Repellency
- Oil Repellency

### Health

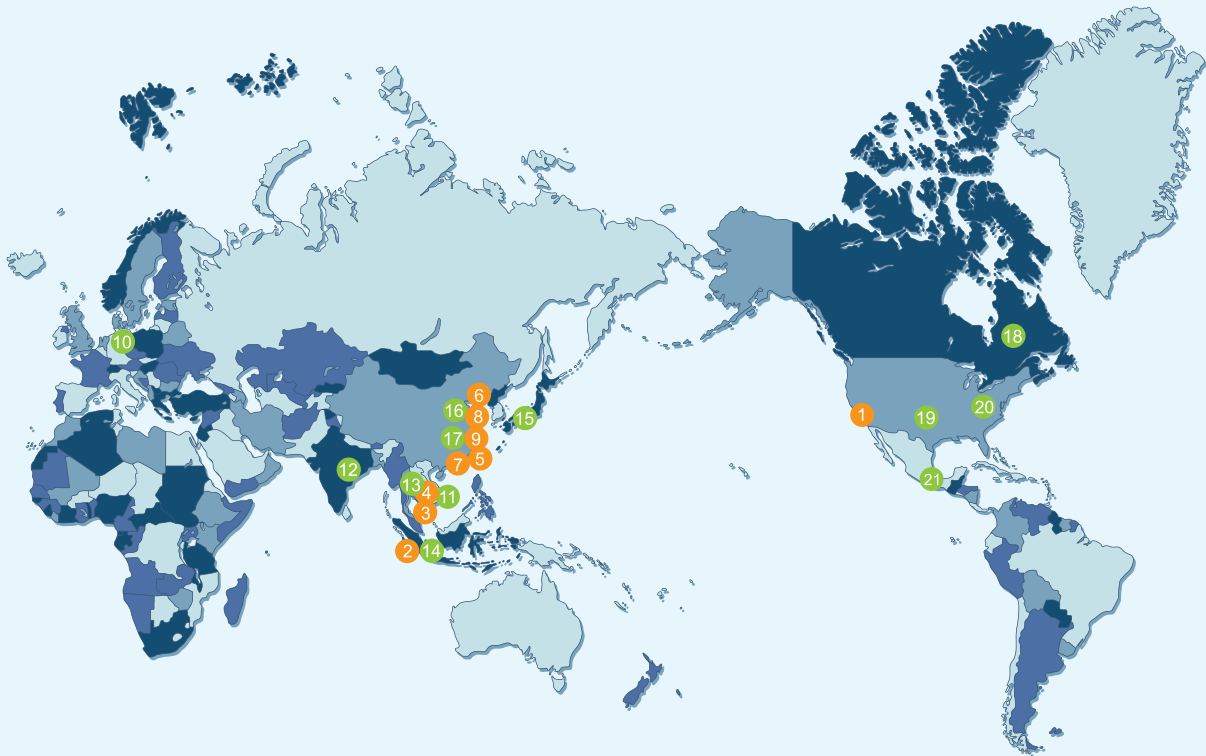
- Antistatic Test
- Antifungal Test
- Antimicrobial
- Insect Repellency
- Deodorization

### Safety

- UV Transmission
- Flammability Test



# FITI GLOBAL NETWORK



- |                                 |                             |                 |
|---------------------------------|-----------------------------|-----------------|
| ① FITI U.S.A. LA Center         | ⑧ FITI China Yantai Branch  | ⑮ Japan BOKEN   |
| ② FITI Indonesia Jakarta Branch | ⑨ FITI China Qingdao Center | ⑯ China CTA     |
| ③ FITI Vietnam Hochiminh Branch | ⑩ Germany SKZ               | ⑰ China CIQ     |
| ④ FITI Vietnam Hanoi Center     | ⑪ Vietnam TRI               | ⑱ Canada CTT    |
| ⑤ FITI China Shanghai Branch    | ⑫ India BTRA                | ⑲ U.S.A. TRI    |
| ⑥ FITI China Dalian Center      | ⑬ Thailand THTI             | ⑳ U.S.A. GSI    |
| ⑦ FITI China Guangzhou Center   | ⑭ Indonesia SUCOFINDO       | ㉑ Mexico INNTEX |

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