

# The PhabrOmeter® – An Innovative Instrument For Measuring The Sensory Properties Of Textiles



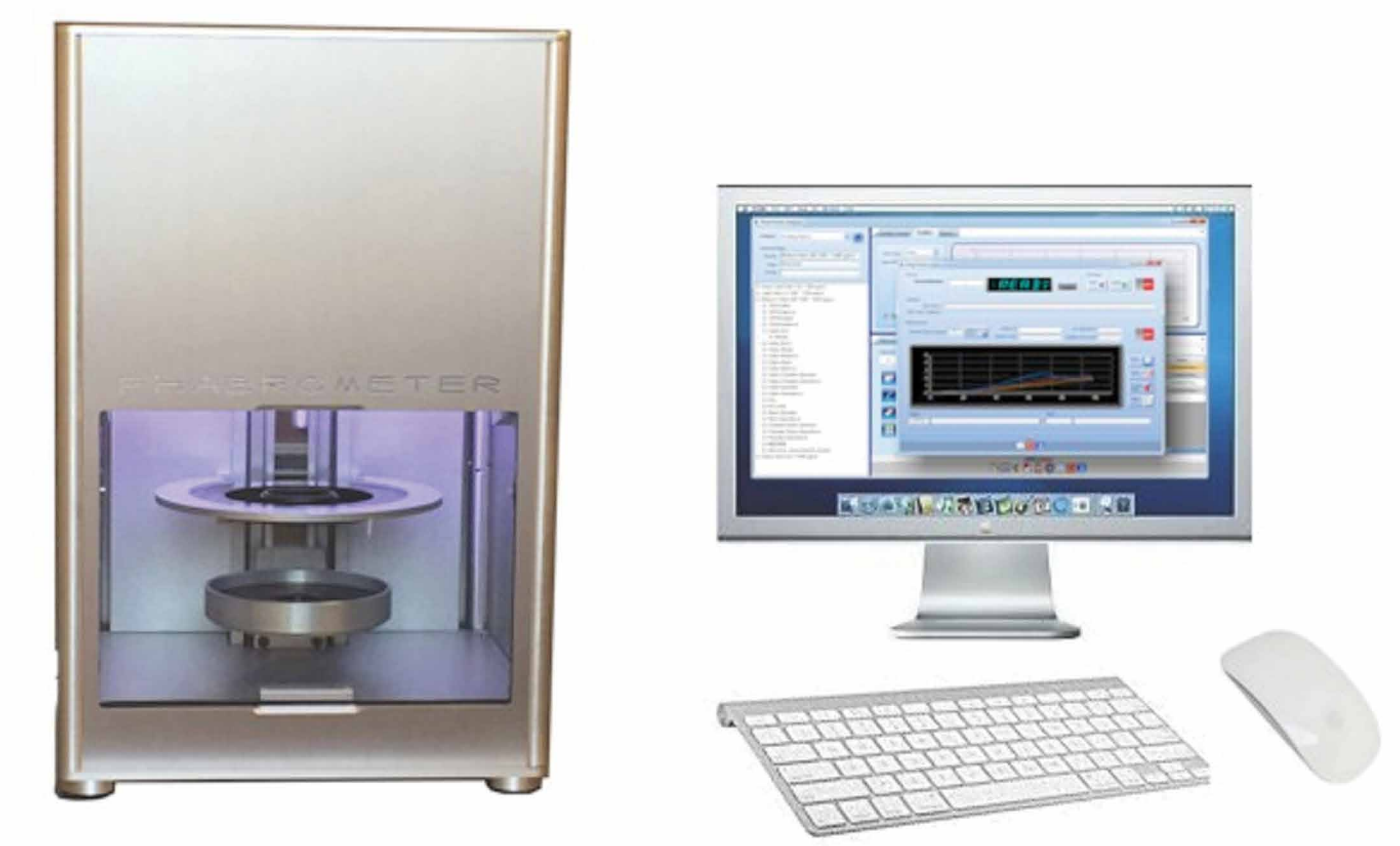
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## The PhabrOmeter® Instrument

The PhabrOmeter®, developed by Nu Cybertek, Inc. in California, USA, is an instrument that evaluates the sensory properties of fibrous textiles. A textile can be defined as 'rough', 'smooth', 'hard' or 'soft' by the simple act of touching or looking. However, a more scientific evaluation of these sensory properties requires the measurement of a material's structural and mechanical response to applied force.

Until now, no instrument has been able to easily and accurately assess the 'sensory perception' of materials – considered to be the most important quality attributes of many textile products. PhabrOmeter® is therefore a powerful tool in the development of high-quality textile products, and has been approved by the American Association of Textile Chemists and Colorists (AATCC).



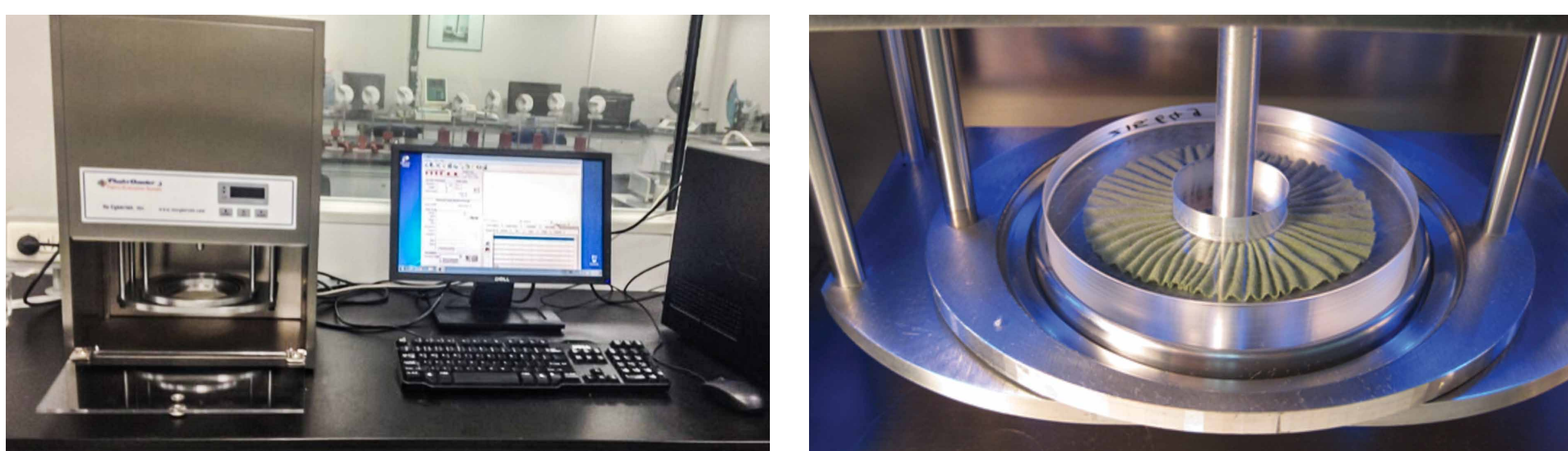
The PhabrOmeter® instrument – a functional device for measuring the sensory properties of textiles.

## How Does the PhabrOmeter® Work and What Data Can It Provide?

PhabrOmeter® is a desktop device connected with a computer. Simple instructions guide the user through all stages from software installation to final data processing.

During testing process, a circular piece of textile is loaded into the instrument and pressed through a nozzle, resembling the same state produced when we handle and compress the textile. The instrument can then measure the tensile, shearing, bending and dynamic frictional responses caused by this deformation.

Parameters such as the fabric wrinkle recovery rate, stretch index, drape coefficient, softness, stiffness and smoothness are then calculated and reported to the user. These parameters allow the user to quantitatively compare the sensory properties of the textile samples.



External (left) and internal (right) components of the PhabrOmeter®



## Applications of the PhabrOmeter®

Applications of PhabrOmeter® are extensive and cover a broad range of processes within the textile, medicinal, chemical and cosmetic industries. So far, they include:

### Textiles

- Evaluating the overall quality of a garment for a desired application
- Evaluating new manufacturing processes and finishing treatments
- Testing the effects of washing and ironing
- Measuring moisture and temperature, environmental aging effects

### Papers & Nonwoven Fabrics

- Measuring the sensory properties of paper towels
- Assessing the comfort of nonwoven fabrics and sheets
- Testing the softness of sanitary goods

### Cosmetics & Medicines

- Evaluating hair softness after shampooing and conditioning
- Testing skin smoothness after application of cosmetic products
- Assessing wound dressing states



**'We believe in a better way to tell fabric  
quality than relying on hands'  
– Professor Ning Pan**

## Contact

If you have any questions, queries or enquiries, please contact:  
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## An Evolving System...

The PhabrOmeter® has proven to be a global success with clients across the European, Asian, American and Australian continents.

