

Medical Textiles



Application of medical textiles in the OR

Research topics

- development and optimization of medical textiles comprising a variety of specifications
- material developments

Special fields

- barrier textiles
- compression textiles
- wound dressings
- anti-microbial textiles
- smart textiles
- filter textiles

Range of services

- interdisciplinary contact point for doctors/hygienists, and manufacturers of medical textiles
- specifications of medical textiles
- biophysiological tests
- functional tests

Wide range of products

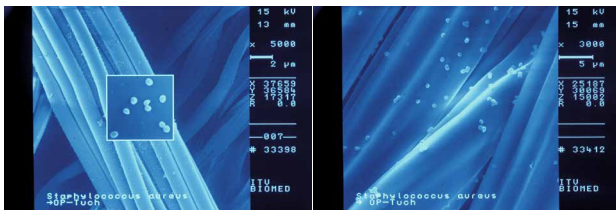
Medical textiles take a special position in the field of technical textiles due to their particular specifications and strict guidelines. The product range, moreover, is extremely wide. It covers hospital textiles and compression textiles,

wound dressings, transdermal systems for drug release, textiles with vital function sensor technology, shock absorbers, textiles with antimicrobial finishing agents, cleaning textiles, incontinence products, etc.

Center of Excellence Medical Textiles

All interdisciplinary core competences of DITF merge together in the Center of Excellence. Specific demands of development and optimization are dealt systematically. Topics, for example, are the manufacture of bio-stable and degradable special fibers respectively or fabric constructions such as spacer fabrics/weft and warp knits, and

nano-nonwoven structures. The Center of Excellence is an interdisciplinary contact point of DITF for manufacturers of medical textiles, doctors, and hygienists in hospitals and rehabilitation centers, retirement and nursing homes including areas such as wellness and health care.



Testing system bio-physiology

The bio-physiological testing system of DITF specially developed for the area medical textiles encompasses tests for

- skin tolerance and physiological wearing comfort properties
- functionality and barrier effect
- ageing and function stability by repeated use
- antimicrobial properties



Left: bacteria on the medical textile.

Middle: testing the resistance to wet and dry bacteria penetration of surgical textiles according to ISO 22610 and 22612.

Right: determine the water vapour and thermal resistance.

The German Institutes of Textile and Fiber Research (DITF) form the largest textile research center in Europe. From the molecule to the finished product, the DITF conduct research and develop products along the entire textile value chain, always taking into consideration the corporate processes and business models. A wide range of textile testing services, prototype construction and a pilot factory complete the offer.

At the Technology Center Biomedical Engineering, research and development starts with the raw material and accompanies all innovation steps up to the finished product. All intermediate products, prototypes and series products are certified according to ISO 13485.

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