

# medtech

developments & testing  
of textile medical devices



# Medtech

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**Medical textiles include all textile products made for medical purposes:**

1. NON-IMPLANTABLE MATERIALS: wound dressings, bandages and (disposable) hygienic products
2. IMPLANTABLE MATERIALS: sutures, stents, vascular prostheses, artificial joints and scaffolds
3. OTHER HEALTHCARE/HYGIENE PRODUCTS: hospital bedding and clothing, operating room garments, masks and drapes, curtains, gloves and wipes

New developments in medical textiles include their functionalisation with active (healing) components, the use of bioactive textiles, and tissue engineering as an alternative to human donor organs...

The treatment of hospital linen with antimicrobial products is an important issue in view of the increasing number of hospital-acquired infections.

## research & development

**The rapid growth of textiles used in medical and healthcare applications is driven by innovations in both textile technology and modern medical procedures.**

- linting and particulate cleanliness in clean room (ISO 5)
- Quick Linting Tester, Centexbel development of a very practical tool to run non-destructive linting tests
- microbial barrier properties
- microbial cleanliness
- encapsulation (texticaments) and prestandard research on cosmetotextiles
- innocuity of textiles
- protection against hospital-acquired infections (e.g. MRSA)
- permeation assessment
- regeneration of lost or damaged tissue
- thermo-physiological comfort assessment

**CENTEXBEL, the Textile Competence Centre, has the expertise and laboratory equipment to assist the industry in developing new medical textile products, and to assess the compliance of these products with the international standards**

## Surgical drapes, gowns and clean air suits

### EN 13795

Requirements for single-use and reusable coverings used as medical devices for patients, clinical staff and equipment and intended to prevent the transmission of infective agents between patients and clinical staff during invasive surgical procedures.

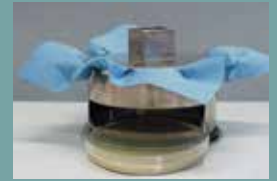
- resistance to dry and wet microbial penetration
- microbial cleanliness
- linting and cleanliness - particulate matter
- resistance to liquid penetration
- bursting strength
- tensile strength



resistance to wet microbial penetration  
EN ISO 22610



linting & cleanliness - particulate matter  
ISO 9073-10



resistance to dry microbial penetration  
EN ISO 22612

- bacterial filtration efficiency
- breathability (delta P)
- splash resistance
- particle filtration efficiency
- burning behaviour test

## Surgical masks for EU and US markets

### EN 14683 - ASTM F2100-11 - ISO 22609

CENTEXBEL assesses the performances of medical face masks for both the European and the American market

## Biological evaluation of medical devices

in vitro cytotoxicity

### ISO 10993-5

This test method to determine the liberation of biologically harmful substances from medical devices is also very well-suited to assess the innocuity of textiles

## Laser resistance of surgical drapes

and/or patient protective covers

### ISO 11810

After having submitted the sample to a CO<sub>2</sub> laser beam, the initial ignition time, the damage caused by the combustion and the penetration of the beam are assessed under both normal and oxygen enriched atmospheric conditions



barrier assessment against viruses



breathability of surgical masks (Delta P)



barrier assessment against biological fluids

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Centexbel & VKC-Centexbel support the textile and plastic processing supply chains in the development and introduction of novel materials, innovative products and technological processes.

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