

# **Introduction to wfk Institutes and wfk Test Materials**

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# ▶ Presentation

- Research Institute
- Testing, Contract development
- Test Materials

# Research:

# wfk Cleaning Technology Research Institute

## ▶ History and premises

Established in 1949

About 100 members from different fields of cleaning technology

New building in 2001

2.800 m<sup>2</sup> in Krefeld (add. 1300 m<sup>2</sup> in Brüggen-Bracht)

800 m<sup>2</sup> technical plant

Microbiology lab, class L2 acc. to §44 IfSG

Clean rooms

# wfk Cleaning Technology Research Institute



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## ► Fields of work

### **Pre-competitive research**

German association of industrial research organisations  
(AiF)

Research association of the German textile industry

European cleaning and hygiene research association

Energy and environmental technology research  
association

German ministry of education and research

European Commission

## ► Fields of work

Advisory center

National and international standardization  
(DIN, CEN, ISO)

Regulations on occupational safety and health

Environmental regulations

Seminars, workshops, training

Development of training modules

**wfk**-International Detergency Conference (IDC)

## ▶ Focus of research

- Development of targets for cleaning processes
- Development of controlling/monitoring techniques
- Development/optimisation of cleaning processes

## ▶ Textile care and maintenance

Operating theatre textiles

Protective clothing

Clean room clothing



***Maintenance of functional properties***

***Renewal of functional properties***

# ▶ Textile medical implants

Production residues

→ Minimization

→ Special cleaning



# ▶ Clean room cleaning

## Increasing requirements

- Electronics industry
- Pharmaceutical industry
- Cosmetics industry
- Food industry
- Automotive industry

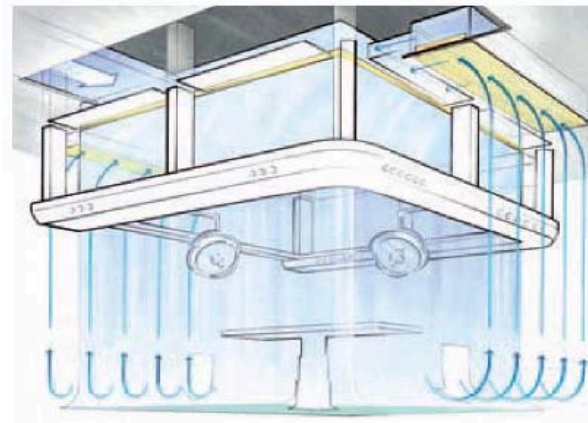
## New reprocessing techniques

- Aqueous
- Carbon dioxide (snow, pellets, liquid, supercritical)
- Plasma



# ▶ Hospital cleaning

Facilities



Contaminated surfaces  
(e.g. cytotoxic drugs)

Medical instruments

Center „Hygiene for Health“



## ▶ Further examples

Industrial Cleaning

Industrial parts cleaning

Cleaning in the food industry



# ► Hygiene management systems

## Increasing hygiene requirements

- Medical products
- Pharmaceutical industry
- Food industry
- Cosmetics industry
- **Home laundry**
- ...

## Development of new processes for

- Cleaning
- Disinfecting
- Sterilisation



## ▶ Quick monitoring methods for self control

Disinfecting efficiency

Hygiene status  
(e.g. pathogenic germs)

Residual contaminations  
(e.g. proteins)

Functional properties  
(protective clothing, medical textiles)

Textile particle release



## ► Sustainability research



- Saving of water, energy and detergents
- Water reuse, waste water treatment
- Cleavable surfactants
- Low temperature cleaning and disinfection

# Testing, contract research:

## wfk Applied Research Institute

## ▶ Services

- **Product performance tests**

Textile and dish wash detergents, household cleaners, industrial cleaners, textiles

- **Appliance performance tests**

Domestic/industrial laundry appliances, domestic/industrial cleaning machines/processes

- **Contract research**

- **Disinfection and hygiene status monitoring**

- **Hygiene management systems**

RABC-certificates (EN 14065, quality label for textile service companies)

- **Environmental technology/analytcs**

Water, waste water, exhaust air, waste, textiles

# Test Materials:

# wfk Testgewebe GmbH

# ▶ Test material production and supply

- **Soiled test fabric monitors**
  - General detergency
  - Bleaching
  - Enzymatic stain removal
  - Redeposition, fibre damage, ash
- **Standard soils, soil ballast systems**
- **Test detergents**
- **Clean load items for washing machines and dishwashers**
- **Custom tailored soiling of fabrics and other substrates**

# ▶ wfk Testgewebe GmbH

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Thank you for your attention!