Biomimetics: Textile innovation based on urticating hairs
Company details:
- Independent, accredited laboratory – privately owned
- Established in 2000
- Start-up company of the Technical University Hof, Münchberg dept.
- Company headquarters in Fulda, Germany, since 2009
- US office in Atlanta (GA) opened in 2015

Some milestones:
2001: "Flügge" research funding: UV-curable textile coatings
2002: First cleaning project: “Grey dirt” testing method for high-pressure cleaner tests
2004: Establishment of the cleaning and washing laboratory, project: washing programs
2008: Construction of our company building in Fulda → engineering office
2009: Investment: „Flatbed weathering"
2010: Establishment of the "Instrumental analytics" department
2011: Simulation of sterilization processes for material testing
2013: Investment: Thermal analysis
2014: Accredited test methods for application testing of cleaning products
2015: Launch of our US activities
2018: Our service directory encompasses over 150 accredited test methods
Our worldwide network

- European headquarters
  - Database Fulda
  - Acc. Lab

Partner labs
- Atlanta, Georgia
- License labs

Licensed labs
Our lab services

Textiles

Cleaning

Textile care

Surfaces

Polymers

Microbiology

Hygiene Performance Tests

Head of textile and cleaning lab: Dipl.-Ing. (FH) Stephanie Leucht

Head of surface and polymer lab: Dipl.-Ing. (FH) Thomas Leucht

Head of biology lab: Dr. Sabine Heumüller-Klug
ACCREDITED EXPERTISE

Our testing laboratory is accredited to DIN EN ISO 17025 by Germany’s national accreditation body, DAKkS, and is also internationally accredited by the International Laboratory Accreditation Cooperation (ILAC). Thanks to this combination, a product only needs to be tested once by us for it to be accepted all over the world. The accreditation certifies that our company affords the necessary expertise to complete a whole range of tests to international standards and to successfully apply a quality management system.
Textile ideas laboratory and prototyping
... the secrets of our work

1. **Textile chemistry**
   Finishing textiles – enabling new functions

2. **Consumer goods**
   Textiles are materials with limitless possibilities

3. **Combining materials**
   Layer and coating designs

4. **Washing and care**
   Textiles maintenance
What is TEX-QMS®?

Practical know-how + conventional testing + high-tech material analytics

- Fitness for use
- Claims
- Consumer protection
- Sustainability
- Raw materials
- Processes

More than 25,000 fingerprints of textile and textile-chemical raw materials stored + fingerprints of textile claims
DAMAGE ANALYSIS OF TEXTILES
Cooperative projects by Weber & Leucht are research projects which focus on topics of high practical relevance with innovation potential. Cooperative projects allow multiple companies to participate and benefit from the revelation of potential for further development and optimization of their products and procedures.

Screening of residual contamination on PPE
Definition of Biomimetics
Structure and analysis of urticating hairs

Branched fiber network

Hollow fiber semi-permeable

Bristle structure
Imitation of urticating hair structures for fabrics

Cellulosic fibers + acidic pretreatment + special peeling process
Web cleaning / dust removal

Contact cleaning roll for machinery

- Removes particulate contamination > 0.3 µm and liquid residues
- Cyclonic effect in accordance to fiber structure
- Suitable for high performance applications in combination with adhesive rolls, e.g. cleanroom products

Future applications?
Do you have any further questions?

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