



Performance | Hygiene | Research





# institute

## In service of the industry

The wfk - Institute for Applied Research carries out performance tests of detergents, cleaning agents and disinfectants, appliance tests and process investigations as well as disinfection and hygiene monitoring.

The institute provides decades of experience, but is working as well in national and international committees on the development of standardised and at the same time practise-relevant testing procedures such as the Energy Label of household appliances or the European Ecolabel for laundry detergents, dishwashing detergents and cleaning agents. Positive test results can be prepared in consultation with us in form of certificates for advertising purposes.

We perform on a confidential basis contract research and consulting.

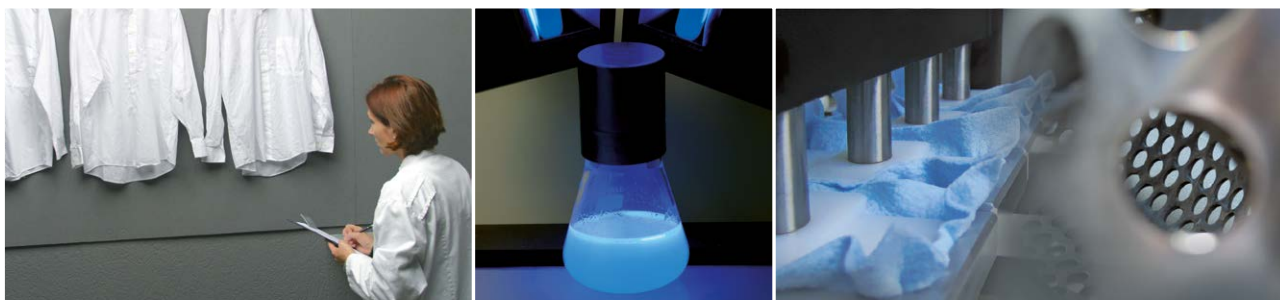
In the field of hygiene and microbiology the institute performs investigations to cleaning, disinfection and sterilisation. Therefore bacteria and spores of bacteria, fungi and yeasts, surrogate viruses and bacteriophages as well as allergens and mites will be applied. The spectrum of investigation contains laboratory tests of products and machines, on-site-investigations of production plants as well as providing of microbiological sample materials for internal validations of processes and products.





# performance testing





## Products on trial

Does a product innovation keep its promises? Does it pass not only in the lab but survives on the market as well? Is it able to compete in the market? Are further optimisations necessary?

Important questions, which should be answered reliably prior to product marketing. Here we act reliably as one of the worldwide leading test houses.

As wfk - Testing Institute we provide decades of experience, but we are working as well in national and international committees on the development of standardised and at the same time practise-relevant testing procedures such as the Energy Label of Household Appliances or the European Ecolabel for Laundry Detergents, Dishwashing Detergents and Cleaning agents. We know the benchmarks, requirements and test programmes which are used by the consumers, purchasers and test and consumer magazines to evaluate the performance of products. The close contact to the wfk - Cleaning Technology Institute ensures that the latest research results are taken into account and new testing methods are applied. The application of modern measurement technology and standardized testing conditions are of course obviously guaranteed.

We support you in your decisions by supplying you with regard to the development potential of your products.



## Performance Testing - Products

The efficiency of product innovation has to be demonstrated in comparison to reference or competitive products respectively procedures. Decision makers and purchasers of retail chains and comparable companies are continually faced with the task to buy washing and cleaning agents with optimal cost-performance ratio out of a broad product range. Machine manufacturers are confronted with the task to document verifiably unique selling propositions, program procedures or sustainability aspects in comparison to competitors. Scientifically founded, comparative performance tests represent here an important decision aid to support the evaluation of product quality. The wfk - Testing Institute offers a wide range of performance tests for a great number of product groups and objectives. Household as well as institutional products will be investigated. The testing conditions will be tailor-made depending on the focus of the investigation. Should you be interested in the investigation of a product which is not listed below, kindly let us know.



### Laundry Detergents and Additives

- Laundry Detergents
- Stain Removers
- Water Softeners
- Fabric Softeners
- Hygiene Rinse Aids
- Ironing Aids
- Refreshing Products
- Colour Catcher Sheets and Sheets for Dryer Application

For the application of these products modern and household usual washing, drying and ironing appliances are available, in which all relevant test conditions can be simulated in a very defined method (water hardness from 0 - 445 ppm, controlled cold and warm water inlet temperature). The essential functions of the used washing and drying programs will be documented with the help of modern measurement technology.



### Automatic and Hand Dishwashing Detergents

- Automatic Dishwashing detergents (classic and multifunctional products in all commercial forms)
- Rinsing Agents
- Machine Care Products
- Hand Dishwashing Detergents

Germ reducing products will be investigated in our microbiological lab (class 2 acc. § 44 IfSG).



### Cleaning Agents

- All Purpose Cleaners
- Wet All Purpose Wipes
- Degreasing Power Cleaners
- Bathroom Cleaners
- Toilet Cleaners
- Disinfectant Cleaners
- Disinfectant Wipes
- Glass Cleaners
- Drain Cleaners
- Dust Cloths and Wet Wipes
- Oven and Grill Cleaners

Should you be interested in the investigation of a product which is not listed above, kindly let us know.



## Appliance Testing

- **Washing Machines**
- **Washer Extractors, Continuous Batch Washers**
- **Dry Cleaning Machines**
- **Dishwashing Machines**
- **Household Dryer, Tumbler and Finisher**
- **Mangle and Ironing Appliances**
- **Floor Cleaning Machines**
- **Cleaning Appliances and -tools as wiping clothes materials, pads and cleaning cloths**

The essential functions of the applied programs will be documented with the help of modern measurement. Floor Cleaning Machines and Cleaning Appliances can be investigated extensively under practical conditions on every desired surface.

In addition to standard performance tests such as the Energy Label Test we develop special program features and examine special effects and new technologies.

## Process Evaluations

- **Process analysis and development**
- **Process optimization regarding efficiency, saving of resources and material care**
- **Development of new procedures**
- **Development, selection and assessment of sensors, technologies and program controls**
- **Market and literature research**

We support you in the search and review of both new methods of resolution in a laboratory and practical scale.

## Performance Testing - Test programmes

The wfk - Testing Institute knows the essential requirements and test programmes which are used by purchasers, competent bodies and consumer magazines to evaluate the performance of products.

Beside commonly used test programmes the wfk - Testing Institute performs also investigations according to custom tailored test programmes.



### EU Ecolabel / Blauer Engel

The European Union / Germany provides the European Ecolabel / Blauer Engel Label for products which are processed as environmentally friendly as possible but nevertheless „fit for use“. The wfk - Testing Institute offers performance tests according to the current requirements for numerous products:

- **Laundry Detergents**  
(Household and Industrial and Institutional Laundry Detergents)
- **Stain Remover**
- **All Purpose, Sanitary and Glass Cleaners**
- **Laundry Detergents**
- **Automatic Dishwashing Detergents**
- **Hand Dishwashing Detergents**



### Nordic Ecolabel

The Scandinavian Ecolabel „Nordic Swan“ labels products which are equally environmentally friendly and „fit for use“. Beside an ecological evaluation of the ingredients the product must prove its performance in an application test.

The wfk - Testing Institute offers performance tests according to the current Nordic Swan requirements for numerous products:

- **Laundry Detergents and Stain Removers**
- **Automatic Dishwashing Detergents**
- **Hand Dishwashing Detergents**
- **Cleaning Agents**



### A.I.S.E.

The A.I.S.E Working Group "Detergent Testing" has published a "minimum protocol for comparative detergent performance testing" for Heavy Duty, Colour Safe and Light Duty Detergents and Stain Removers. The wfk - Testing Institute offers the corresponding tests.



## IKW

The IKW (Industrieverband Körperpflege- und Waschmittel e.V.) has published numerous recommendations for the quality assessment of detergents and cleaners:

- All Purpose Cleaners
- Degreasing Power Cleaners
- Bathroom Cleaners
- Toilet Cleaners
- Glass Cleaners
- Hand Dishwashing Detergents
- Automatic Dishwashing Detergents
- Oven Cleaners

The wfk - Testing Institute offers the corresponding tests.



## Tests according to Consumer Magazines

The wfk - Testing Institute knows the essential requirements and test programmes which are used by purchasers, competent bodies and consumer magazines to evaluate the performance of products.

The wfk - Testing Institute supplies performance tests for a large number of products according to published test criteria and -gradings (e.g. Stiftung Warentest, Öko-Test).



## Energy-Label

The European Union has adopted directives with the target to reduce the energy consumption of products. Observing these guidelines is mandatory for the manufacturer, the legally required consumer information is given in form of an energy label for a range of products. The data for energy efficiency will be documented on the energy label. The basis for testing are EC directives and standards.

The wfk - Testing Institute has a wide range of facilities for the measurement of energy efficiency. The measurement results give information about potential energy savings and prove the compliance with the legal requirements. The wfk - Testing Institute offers investigations for the energy labelling of numerous products:

- Washing machines
- Tumble driers
- Dishwashing machines



## Focussing on hygiene technology

The department Hygiene and Microbiology performs services in the field of cleaning, disinfection and sterilisation. It works routinely with bacteria and spores of bacteria, fungi and yeasts, surrogate viruses and bacteriophages, allergens and mites.

The spectrum of analysis contains laboratory analysis of products and machines, on-site visits of production plants and provision of test materials for internal control of processes and products.

The field of application ranges over all areas of cleaning technology including clean room technology. On the following pages you find a small excerpt from our focus of activity. If your application field is not covered, please do not hesitate to contact us.

# hygiene & microbiology



# Hygiene & Microbiology - Examples



## Disinfectants Testing

Chemical disinfectants and antiseptics are used for chemical or chemothermal disinfections and applied for hand and skin disinfection, surface disinfection, instrument disinfection, textile disinfection etc. Efficient disinfectants and antiseptics can be listed e.g. at the Verbund für Angewandte Hygiene (VAH), at the Robert-Koch-Institut (RKI) or at the Deutsche Veterinärmedizinischen Gesellschaft (DVG), if specific requirements are fulfilled.

We perform investigations as well as expert reports for listing desires or analyse in preinvestigations the germ reduction efficacy of disinfectants and antiseptics.

- **Quantitative suspension tests for the evaluation of the efficacy**
- **Quantitative suspension tests under conditions which are representativ for practical use**
- **Laboratory investigations which simulate practical conditions**
- **On-site investigations with practical conditions**



## Hygiene in Wash and Dish Washing Processes

Textiles as well as dishes can be highly contaminated with microorganisms. Therefore an appropriate cleaning and reprocessing is necessary - especially in hygienically sensible areas. The germ reduction in cleaning processes will be influenced by the parameters mechanic, temperature, chemistry and time. For determination of germ reduction biomonitors will be used which correspond to the official demands of DGHM, VAH, RKI for washing processes or DIN 10510 - DIN 10512 for dish washing processes. For household sector investigations the biomonitors will be adjusted.

We analyse your products or machines concerning

- **germ reduction**
- **allergen reduction (e.g. to NSF P 351)**
- **reduction of live mites (e.g. to NSF P 351)**



## Biological Testing of Materials

For certain application fields products or parts of products can be composed of materials which have antimicrobial properties. Thus e.g. plasters of wound dressings can be equipped with antimicrobial properties to prevent wound infections. An other example are components which often come in contact with water and tend towards biofilm building. We can help you with the product development or with the concluding evaluation of products by performing investigations according to standardized procedures or specific customer requirements. In our laboratory microbiological tests of textiles, plastics, rubber and coatings with varnishes or wall dispersions are routinely established.

Investigations which refer to microbiological and textile technological concerns are e.g. analysis of resistance to wet and dry bacterial penetration or analysis of surgery clothes according.



### Reprocessing of medical devices

The reprocessing of medical devices is a challenging and complex topic. At this it is to guarantee the hygiene safety of the products according current national laws and guidelines as well as by application of appropriate standards. Without appropriate reprocessing a high liability risk exists for the operator of medical devices.

We support you with the product or procedure development or with the concluding evaluation of products or procedures by performing investigations according to appropriate standards, standardized procedures or specific customer requirements.

In addition to this we can provide you with the process challenging devices for the cleaning and disinfection tests for internal controls.



### Certification of laundries

The wfk-seal for textile hygiene attests that in your company the textiles will be reprocessed according to the state of the art and can therefore be used in hygienically sensitive areas like hospital and health care sector as well as food industry. It enables you to demonstrate the adequate hygienic reprocessing of the textiles to your customers and thus to strengthen the confidence in your services and products.

The judgement of the textile reprocessing followed defined criteria which will be proved in annual laundry visits. Additionally internal controls for quality assurance are necessary.

Laundries and textile service enterprises which reprocess hospital textiles have to fulfil the requirements to the Robert-Koch-Institut (RKI) and have to establish a hygiene management system according DIN EN 14065 (RABC). For the reprocessing of textiles from the food sector a hygiene management system DIN EN 14065 (RABC) has to exist which fulfils the requirements of the IFS, the BRC and the DIN 10524.



### Test Materials for Validation of Reprocessing Processes

We help you with the validation of your cleaning procedures and can provide the following test materials:

- **Bioindicators for disinfection testing of washing procedures (DesVali W)**
- **Process challenging devices for disinfection testing of dish washing procedures (DesVali G)**
- **Process challenging devices for the reprocessing of medical devices (DesVali R)**
- **Test materials for water samples**
- **Contact samples (RODAC) for the determination of the hygiene properties of textiles and surfaces**

DesVali W are bioindicators that match the requirements of the handbook for validation of disinfecting washing procedures for reprocessing textiles used in hygienically sensible areas. The handbook can be ordered for free i.e. from wfk-Institut für Angewandte Forschung GmbH (info@wfk.de, +49 2151 8210-0).

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