

Antibacterial efficacy of non-porous surfaces

ISO 22196:2011-08 „Measurement of antibacterial activity on plastics and other non-porous surfaces“ is an internationally recognized standard for testing the antimicrobial activity of solid surfaces against bacteria.

Hohenstein Laboratories has obtained accreditation by the German DAkS for these tests with a flexibilisation that allows the free selection of standardised or equivalent test methods.

Customer benefit

- Product optimization during development
- Consumer safety
- Proof of efficacy
- Advertising impact

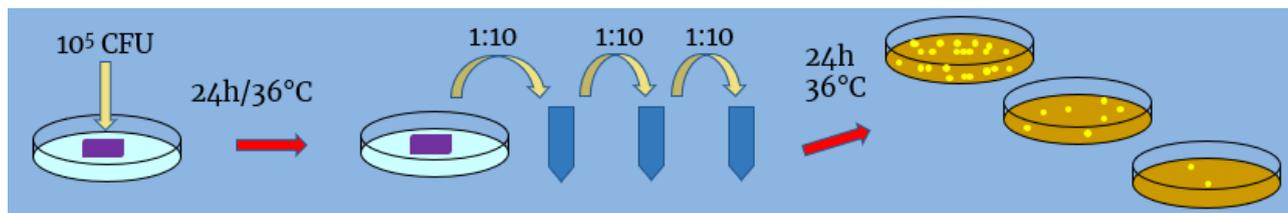
This test is particularly suitable for

- Surfaces with biocidal finish
- Floor coverings
- Tiles
- Work surfaces
- Sanitary fittings
- Lacquers / colours
- White goods
- Plastic pipes
- Silicones



Test principle

The test organism is applied to the test specimens in a defined concentration, followed by incubation over the defined contact time. Afterwards, test bacteria are eluted from the specimens and the bacterial count is determined. A reduction value is calculated for the test sample in comparison to a non-functionalized reference material.



Test organisms

- ***Staphylococcus aureus* ATCC 6538P** (Gram-positive) and
- ***Escherichia coli* ATCC 8739** (Gram-negative) are obligate according to ISO 22196

Additional test strains (optional, depending on the application)

- *Staphylococcus aureus* ATCC 33592 (MRSA)
- *Klebsiella pneumoniae* ATCC 4352
- *Listeria monocytogenes* ATCC 15313
- *Salmonella enterica* ATCC 13076
- *Pseudomonas aeruginosa* ATCC 15442
- *Candida albicans* ATCC 10231

Assessment criteria

Efficacy	Reduction value A (log CFU)
no	$A < 2$
significant	$2 \leq A < 3$
strong	$A \geq 3$

Marketing instruments

On passing the test, the product may be awarded the certificate “Antibacterial Activity” and/or the Quality Label “Antibacterial” (validity: 1 year). The term “Antibacterial” is used when there is significant to strong efficacy against Gram-positive and Gram-negative bacteria.

Test sample requirements

General

- Test samples will be examined as sent in, unless otherwise agreed. The samples are usually decontaminated using UV and by wiping with an alcoholic solution.
- Test samples must be packed to avoid contamination during transport, e.g. separately in plastic bags
- Provide sufficiently precise designations of the test sample (material composition, item number, colour etc.)

Quantity of test material

- A minimum of 12 test specimens with a prepared size of 5x5 cm
- additional 6 test specimens (5x5 cm) per additional test germ

Test duration

- 2 - 3 weeks; date confirmation after receipt of test sample