

# Antimicrobial Testing for Industrial Products

**W**uXi AppTec offers the following assays to evaluate antimicrobial activity related to industrial products, such as textiles/carpet and plastics.

Any of the standard test methods listed here can be modified to include different/additional organisms as well as different/additional exposure times to meet client needs.

## ASTM E-1153

Determines the efficacy of sanitizing agents on various inanimate surfaces, such as counters, floors other areas/materials that are routinely cleaned. It is typically conducted with variety of microorganisms, most often those of concern in the environment or in product application.

## ASTM E-2149

Quantitatively evaluates the effectiveness of a sample treated with a non-leaching antimicrobial by shaking in an organism suspension. The typical challenge organism is *Klebsiella pneumoniae*.

## ASTM E-2180

Quantitatively evaluates the effectiveness of an antimicrobial agent incorporated into hydrophobic polymeric material. Recommended challenge organisms are *Staphylococcus aureus* and *Pseudomonas aeruginosa* (or *Klebsiella pneumoniae*).

## ASTM E-2315

Quantitatively evaluates the antimicrobial activity of a test material within a specified time period using a time-kill procedure. The procedure utilizes test organisms that may be representative of the microbial flora encountered under conditions of use, or may represent standardized strains.

## ASTM E-2471

Qualitatively evaluates (both stereo-microscopically and visually) antibacterial and antifungal activity at the fiber layer and at the primary backing layer of carpet when challenged with *Aspergillus niger*, *Serratia marcescens* and *Staphylococcus aureus*.

## ASTM G-21

Qualitatively evaluates the ability of the synthetic polymeric test material to support the growth of a mixture of five (5) fungi. The synthetic polymeric test material is usually provided in the form of molded and fabricated articles, tubes, rods, sheets and film materials.

## AATCC Method 30, Part III

Qualitatively evaluates the antifungal activity of a textile sample when challenged with *Aspergillus niger*.

## AATCC Method 100

Quantitatively evaluates the antimicrobial effectiveness of a textile product when challenged with *Staphylococcus aureus* and *Klebsiella pneumoniae*.

## AATCC Method 147

Qualitatively evaluates the antimicrobial activity of diffusible antimicrobial treatments on textile products when challenged with *Staphylococcus aureus* and *Klebsiella pneumoniae*.

## AATCC Method 174 Part 1

Qualitatively evaluates the antimicrobial activity of carpet when challenged with *Staphylococcus aureus* and *Klebsiella pneumoniae*.

## AATCC Method 174 Part 2

Quantitatively evaluates the antimicrobial effectiveness of carpet when challenged with *Staphylococcus aureus* and *Klebsiella pneumoniae*.

## AATCC Method 174 Part 3

Qualitatively evaluates the antifungal activity of carpet when challenged with *Aspergillus niger*.

## Zone of Inhibition / Kirby-Bauer

Demonstrates the activity/potency of antimicrobials or antibiotics, based on measuring the zone of inhibition observed for specified microorganisms. Areas of particular application include materials treated or infused with an antimicrobial agent that leaches out of the material.

## CUSTOM ANTIMICROBIAL STUDIES

With years of experience conducting microbiology/microbial testing and a laboratory dedicated to performing custom microbial studies, WuXi AppTec offers clients extensive expertise in developing custom protocols to meet specific needs.

WuXi AppTec is a global leader in providing discovery, testing and manufacturing services for the pharmaceutical, biotechnology and medical device industries. Research-driven and customer-focused, with operations in China and the U.S., WuXi AppTec offers a broad and integrated portfolio of services designed to assist our customers with cost-effective and efficient outsourcing solutions.

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