

ULTERION<sup>®</sup> taking solutions farther...

**Stay Fresh<sup>®</sup>**  
Antimicrobial

Peroxide Powered Antimicrobial Technology

## Innovative, Highly Durable, Eco-Friendly Antimicrobial Textile Technology

*Stay Fresh<sup>®</sup>* is a revolutionary antimicrobial technology. What makes *Stay Fresh* different from other antimicrobials is its chemistry and extraordinary durability. Hydrogen peroxide, the ingredient that provides the gentle bleaching action in today's generation of color-safe, alternative bleaches, is the active ingredient. *Stay Fresh* uses a binder to lock in the active agent, and allow the treated textile to sustain antimicrobial performance even after repeated laundering.



*Stay Fresh* is the only antimicrobial technology containing hydrogen peroxide approved by the U.S. Environmental Protection Agency for imparting antimicrobial preservation of textiles.

### How Does *Stay Fresh* Work?

*Stay Fresh* textile treatments lock the power of hydrogen peroxide into fabrics. *Stay Fresh* treatments have been specially designed to allow very low concentrations of hydrogen peroxide to effectively inhibit the growth of bacteria and fungi which cause unpleasant odors, discoloration, staining, deterioration or corrosion on treated articles.

The two fabric samples to the right were inoculated, incubated and then photographed after 3 days. The untreated fabric shows almost complete overgrowth while *Stay Fresh*-treated fabric shows no growth.

Microbes can feed off human perspiration and body oils, resulting in odorous by-products. *Stay Fresh* suppresses the generation of odors by inhibiting microbial growth on the fabric.



### Eco-Friendly Technology

*Stay Fresh* technology utilizes environmentally sound chemistry. Hydrogen peroxide degrades to water and oxygen with no dangerous decomposition products. Textiles treated with *Stay Fresh* technology can also reduce environmental impact: the articles stay fresher and cleaner for longer, reducing the need for frequent laundering, and allowing lower laundering temperatures to completely clean the fabrics.

**Stay Fresh<sup>®</sup> is a registered trademark of Quick Med Technologies, Inc. EPA Registration No. 87358-1  
Ulterior International, LLC is licensed by Quick Med Technologies, Inc.**

### Advantages

*Stay Fresh* antimicrobial technology adds real value to textiles by extending functionality for both the producer and end user.

- ✓ Unmatched antimicrobial durability: validated to 75 laundering cycles
- ✓ Controls odor and staining due to microbes: clothing stays fresher and cleaner longer
- ✓ Easy to care for: no special handling, wash hot or cold water, with or without chlorine bleach
- ✓ Safe: non-toxic, non-irritating and non-sensitizing to the skin
- ✓ Cost-effective: both in application and in preserving inventory

### Manufacturing Ease

*Stay Fresh* treatment is easily applied during the textile finishing process using standard textile finishing equipment and processing conditions. *Stay Fresh* binder and hydrogen peroxide are co-applied with softeners and other finishing agents. Drying locks the active agent into textile fibers securely so it can remain effective for the life of the garment.

### Ideally Suited For

- |               |              |                        |                        |
|---------------|--------------|------------------------|------------------------|
| ✓ Active Wear | ✓ Uniforms   | ✓ Socks & Hosiery      | ✓ Hospital Scrubs      |
| ✓ Underwear   | ✓ Sportswear | ✓ Towels               | ✓ Hospital Furnishings |
| ✓ Work Wear   | ✓ Sleepwear  | ✓ Bedding & Bed Linens | ✓ Upholstery           |

### About Hydrogen Peroxide

Hydrogen peroxide is nature's own antimicrobial agent, produced by human cells to fight invasive bacteria, and naturally occurring in honey as a preservative. Consumers are familiar with hydrogen peroxide as a color-safe bleaching agent and stain fighter for laundering applications. Hydrogen peroxide functions by destroying the cell membrane as well as internal cell structures, thereby killing the microbe and inhibiting the growth of microbial colonies.

Chemically, hydrogen peroxide is simply water with an extra oxygen molecule (H<sub>2</sub>O<sub>2</sub>), making it into a highly effective antimicrobial agent. Very low concentrations of hydrogen peroxide are effective against a wide range of microorganisms, including bacteria, fungi, algae, viruses, and spores.

### Hydrogen Peroxide Proven Effective vs. Problematic Microbes\*

#### Gram-Positive Bacteria

- *Staphylococcus aureus*
- *Corynebacterium diphtheriae*
- *Listeria monocytogenes*
- *Streptococci*
- *Micrococcus luteus*
- MRSA
- *Enterococcus faecium* (VRE)

#### Gram-Negative Bacteria

- *Escherichia coli*
- *Klebsiella pneumoniae*
- *Pseudomonas aeruginosa*
- *Salmonella choleraesuis*
- *Proteus vulgaris*
- *Serratia marcescens*
- *Proteus mirabilis*

#### Fungi

- *Aspergillus niger*
- *Cladosporium spp*
- *Trichophyton mentagrophytes*
- *Candida albicans*
- *Penicillium citrinum*
- *Fusarium solani*
- *Alternaria spp*

#### Viruses

- Influenza A (H1N1)
- Rhinovirus
- Herpes simplex (HSV-1)
- Feline calicivirus

\* Partial List

Note: the above information on hydrogen peroxide is taken from published sources and has not been reviewed by EPA.  
Display of this information is not intended to be a public health claim.