




# Clean up and Profit with Micro-Denier fibre ~ New Leading Edge Technology

*Cleaning up the environment - one room at a time*



## LIVING WITH INFECTION AND DISEASE

Annual cost of hospital-acquired infections ranges from \$35.7 - \$45B (in 2007)  
*The Institute of Medicine*

65% of Infection Prevention staffs in US hospitals consist of 1 or fewer FTEs. Half [of these hospitals] saw reductions in overall budgets for infection prevention ... nearly 40 % had layoffs or reduced hours, and 33% experienced hiring freezes.  
*APIC 2009 Survey*

Pathogens such as C. diff, VRE, MRSA, norovirus, influenza ... can survive in the healthcare environment for extended periods," the report says. "Infections are well adapted to survive in dust and on floors, bedrails, phones, call buttons, curtains and other surfaces. We can demand and audit hand-washing all we want, but without a clean environment, hands will quickly become re-contaminated."  
*Better cleaning key to infection control: union study  
 The Hamilton Spectator, March 2009*

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## CHALLENGES

- Poor hygiene
- Time constraints
- Dwell-time ... a "fantasy"!
- Impacts air quality
- Global mobility
- SARS, e-Coli, H1N1, what's next?

*- Do MORE with LESS!*

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## DEFINING THE PROBLEM

Is frequent cleaning necessary & the necessary for safety?





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## STATISTICS

- Foodborne Illness caused 76 million illnesses
- 5,000+ deaths (CDC)
- 3.1MILLION Nosocomial infections each year
- Results in 100,000+ deaths!
- Increased Liability costs
- Hospitals have reduced cleaning staffs by 25%
- These issues result in a \$10 Billion+ problem

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## CLEANING?

Expert • Independent • Nonprofit  
**ConsumerReports.org**


### Best glass cleaners - Plenty of clear winners

To see which glass cleaners really work, you have to make a mess. We took clean panes of glass and coated some with outdoor grime (mineral oil, clay, and a solvent) and others with indoor grime (those ingredients plus synthetic skin oil to simulate greasy finger marks). We subjected additional panes to repeated billows of tobacco smoke, letting them sit for three days to develop an amber film.

Then we tested the merits of 10 cleaners. Plus plain tap water and a home brew (see [recipe](#)), using a scrubbing machine to rub a sheet of cheesecloth plus cleaner back and forth over each pane. Three panels judged cleaning, streaking, and any smearing that occurred when a tissue-wrapped finger drew a figure 8 on the glass.

Finally, we put drops of each cleaner on nine panels covered with old paint (three with flat paint, three with satin, three with semigloss), let the drops dry overnight, and checked for damage.

**What we found**  
 All the cleaners, including our home brew and tap water, were very good or excellent overall. On indoor grime, Windex No Drip and Weiman excelled; on outdoor grime, five cleaners plus the home brew and tap water excelled. All were excellent at removing smoke.



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## DISINFECTING?

The following was taken verbatim from the EPA's Region 1 Newsletter

5. Antimicrobial Labeling Update from EPA From Practice Greenhealth List Serve: EPA said on June 12 that **approximately one-third of 325 registered hospital disinfectants**, and **36 of the 72 tuberculocides** tested thus far under the Antimicrobial Testing Program (ATP) **failed to meet its standards for effectiveness against bacteria**. Products failing the tests "are brought into compliance through regulatory or enforcement measures, or a combination of both."

EPA said, EPA has already ordered changes to the antimicrobial claims on some product labels and is reviewing others, according to a table of test results and other information published on the agency's antimicrobial testing website June 12. The reviews could result in requiring registrants to reformulate their products, reduce their product claims, change their use directions, or cancel the products, EPA said. Products could be recalled.

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## CLINICALLY ACCEPTABLE

### CDC Guidelines

Product developed in compliance with CDC commercial wash cycle protocols for disinfection of Blood Borne Pathogens:

### Stops Cross Contamination

New methodologies, best practices and products play a key role in eliminating cross-contamination.

### Durability

Durable, chlorine stable textiles withstand commercial wash cycles with minimum shrinkage and fading.

### Efficient and Ergonomic

Hardware built to improve productivity and work rate, and reduce workers compensation claims

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## 'TRAVEL INDUSTRY CROSSES ITS FINGERS OVER H1N1'

Atlanta Business Chronicle - by J. Scott Trubey  
August 3, 2009

- Revenue likely took a **\$4 million to \$5 million** hit in the quarter, and future revenue might be hit by an equal amount, AirTran Senior Vice President Kevin Healy said July 22.
- United Airlines** and **Continental Airlines Inc.** both estimated a **\$50 million** H1N1-related revenue hit in the quarter.
- JetBlue Airways Corp.** said H1N1 affected demand across its network, and reduced revenue to Mexico in the second quarter by **\$5 million**.
- Miami-based **Royal Caribbean Cruises Ltd.** said July 29 that the H1N1 scare depressed its second-quarter earnings.
- Marriott International Inc.** said the bug impacted markets across the globe, but particularly in Mexico. "Occupancy at our 17 hotels there (Mexico) in May were as low as the mid-teens with RevPAR (revenue per available room) **down 80 percent**,"
- Starwood Hotels & Resorts Worldwide Inc.** executives said Mexico, Asia and some gateway U.S. markets were affected by flu panic, which took an estimated **\$10 million** toll on the company.

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## PERFORMANCE

- Mechanical ~ Removes everything from surface
- Fiber is smaller than many bacteria
- Absorbent to the EXTREME
- Unrivalled durability
- Dwell Time = **ACHIEVED!**

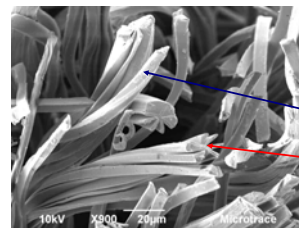
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## It's all about Mitigating Risk



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## Remove & Eliminate



1: Polyester / Polyamide conjugated filament before spitting

2: 8-triangular polyester micro-denier fibers surrounding the polyamide core = hub & spokes

3: Complete separation **MUST** occur to achieve performance. The less separation the less performance

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## Remove & Eliminate

### Relative Size = Performance

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## CONCEPT

A new paradigm is needed to help control and prevent the spread of germs.

Micro-denier textiles combined with unique antimicrobial chemistry delivers unparalleled efficacy in the

### Removal & Elimination

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## Remove & Eliminate

Method	Log Remaining (Numerical)
O	~4.8
B	~4.5
C	~2.8
F	~1.8
HW	~1.5
E	~1.2
W	~1.0
T	~0.8
CLEAN-AM High Performance Wipe	~0.2

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## Remove & Eliminate

### Rechargeable Surfaces

- Micri//on™ Chlorine bond at surface
- Bacteria come into contact with surface
- Bacteria killed
- Chlorine consumed
- Chlorine bleach rinse recharges surface

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## Remove & Eliminate

**ATS LABS:** Removal of C. Difficile from hard surfaces (Non-GLP)  
 Project #: A03670  
 Test Date 3/6/06  
 Result: **99.99% Reduction of spores**

**ATS LABS:** Removal of MRSA from hard surfaces (Non-GLP)  
 Project #: A02326  
 Test Date 7/26/04  
 Result: **99.9999 % or a 6.41 Log Reduction of MRSA**

**JAMA** The Journal of the American Medical Association  
 Vol. 289 No. 10, 1274-1277, March 12, 2003

**Conclusions:** In this evaluation of hand hygiene agents, handwashing with soap and water, 2% chlorhexidine gluconate, or chlorine-containing towels (microfiber) reduced the amount of *B. atrophaeus* spore contamination, whereas use of a waterless rub containing ethyl alcohol was not effective in removing spores.

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## Remove & Eliminate

- Chlorine is readily available and a powerful antimicrobial
- Chlorine is chemically bound & anchored to the additive embedded in the fiber forming resin
- Chlorine bound to the surface is chemically stable to heat, UV and textile treatments.
- It is physically stable to washing and fabric abrasion
- Since the Chlorine is chemically bound it does not smell or irritate skin
- Chlorine chemicals are widely used in industrial processes and household cleaners

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