




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?

Liability & the safety of the medical community?

Respiratory infections & the safety of the medical community?





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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!**

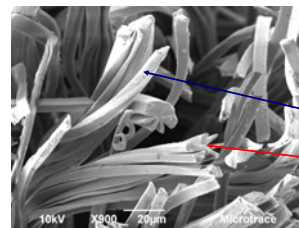
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It's all about Mitigating Risk



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Remove & Eliminate



1: Polyester / Polyamide corrugated 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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Micri//on™ Advantages

- Unique Rechargeable anti-microbial
- Broad Spectrum Efficacy:
 - Anti-bacterial
 - Anti-fungal
 - Anti-viral
- Effective in minutes NOT hours
- Durable and stable
- Does not leach into the Environment
- No Heavy metals
- Effective for the life of the article
- Does not irritate skin or smell
- Sustainable & GREEN

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The bottom line...

- Exceed OSHA and CDC recommendations for Blood-Borne Pathogens
- Reduce time & labor
- Reduce annual chemical & material costs
- Reduce repetitive stress injuries
- Reduces mopping to a 'light duty' task
- Reduce gas & electric consumption
- Reduce 'slip & fall' risk
- Reduce training costs
- Reduce water use & waste disposal

.....all this and a new standard of clean!

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Remove & Eliminate Micri//on™

PerfectCLEAN® High Performance Wiper

Organism	Exposure Time			ATS Lab Project
	2 minutes	5 minutes	10 minutes	
Staph. aureus	>99.99%	>99.999%	>99.999%	Project # A07337
MRSA	>99.999%	>99.999%	>99.999%	Project # A07373
Salmonella enterica	99.2%	>99.999%	>99.9999%	Project # A07529
Listeria monocytogenes	96.6%	98.9%	99.9%	Project # A07529
Escherichia coli	84.3%	99.5%	>99.9999%	Project # A07529
Trichopyton mentagrophytes	96.5%	>99.999%	>99.999%	Project # A07474
H1N1 (Swine Flu Virus)	NA	>99.9994%	>99.9992%	Project # A08009
Bacterial Spores	Exposure Time			ATS Lab Project
	30 minutes	1 Hour	3 Hours	
Clostridium difficile	> 99.9%	>99.9%	>99.9%	Project # A07374

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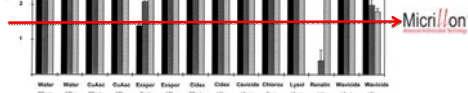
PEOPLE ARE TAKING NOTICE!



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EVIDENCE BASED PERFORMANCE

ABSTRACT
This study compared the activity of commercial liquid sterilants and disinfectants on *Bacillus subtilis* spores deposited on three types of devices made of noncorrodible, corrodible, or polymeric material. Products like Renalin, Exspor, Wavicide-01, Cideplus, and cupric ascorbate were tested under conditions specified for liquid sterilization. These products, at the shorter times indicated for disinfection, and popular disinfectants, like Clorox, Cavicide, and Lysol were also studied. **Data obtained with a sensitive and quantitative test suggest that commercial liquid sterilants and disinfectants are less effective on contaminated surfaces than generally acknowledged.**



Bacterial Spores Survive Treatment with Commercial Sterilants and Disinfectants
Jose-Luis Sagripanti* and Aylin Bonifacio
Molecular Biology Branch (HFZ-113), Division of Life Sciences, Office of Science and Technology, Center for Devices and Radiological Health, **Food and Drug Administration**, Rockville, Maryland