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Healthy Environment Innovations

Press Release

Healthy Environment Innovations successful test of Sterilray™ Technology.

C-diff surrogate Clostridium sporogenes reduced by 100% in test.

New Durham, NH, January 15, 2007: Healthy Environment Innovations (HEI) released results of another round of tests on the efficacy of its Sterilray™ Technology using the GermBuster™ Sanitation Wand. The test was performed at Microbiology Research Associates, Inc. in Acton, MA. Testing Clostridium sporogenes produced the following result:

- Plates with approximately 2ml of Clostridium sporogenes suspension was exposed to a dose of 83.1 mj/cm^2. A kill, representing a 100% reduction, occurred representing a log 6.6 reduction.
- HEI conducted this test with a special low-power Sterilray™ lamp in order to control the amount of exposure. The lamp is 1/30 the power HEI will use in the sanitation wand.

Clostridium sporogenes is a gram positive motile bacillus widely distributed in nature and also in the intestines of animals. The spores are oval,central or subterminal. Clostridium sporogenes spores may survive boiling for periods ranging from 15 min up to 6h.

“Clostridium sporogenes is used as a surrogate to test for disinfection capability on clostridium difficile because it is much less difficult to get reproducible results. It has the same resistance to general disinfection treatments, so it represents a more reliable test.” said Ed Neister, president of HEI. “This test proves that we can disinfect surfaces contaminated with C-diff in less than one second using a GermBuster™ Sanitation Wand.”

“C-diff is a problem in many facilities.” said John Neister, EVP. “This test with a C-diff surrogate was designed to show the effectiveness of the GermBuster on disinfecting an area extremely quickly. Other methods including steam and hydrogen peroxide require the area to be evacuated for 24-36 hours. The GermBuster can be with people in the area 24/7. It also can be used as often as necessary to insure complete sanitation of a facility.”

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For more information, press only: John Neister, 603-859-8600, john.neister@he-innovations.com
For more information on GermBuster™ Sanitation Wand: http://www.he-innovations.com

For Immediate Release

Microbiology Research Associates, Inc. 33 Nagog Park, Acton, MA 01720 • (978) 263-2624 • FAX (978) 263-2786

MICROBIOCIDAL ACTIVITY OF GERMBUSTER STERILRAY UV WAND PRODUCT VS. COLSTRIDIUM SPOROGENES ATCC #19404

Tested for: Healthy Environmental Innovations
PO Box 61
152 Brackett Road
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Product: Germbuster Sterilray UV Wand

Method: Percent Bacterial Reduction

Investigator: James J Barbato
Microbiology Research Associates, Inc.
33 Nagog Park
Acton, MA 01720

Project #: HEI-004 **Report #:** HEI004-007

Notebook Reference: Book 96, Page 81-83

Test Organism:

1. *Clostridium sporogenes* ATCC #19404

Method and Procedure: Method: Study #HEI-004

Conclusions:

The Germbuster Sterilray UV Wand product killed 100% of viable *Clostridium sporogenes* in 22 seconds of exposure to 83.1. mj/cm of UV exposure.

Results:

Table I

**Percent Bacterial Reduction of
Germbuster Sterilray UV Wand
vs. *Clostridium sporogenes* ATCC #19404**

** Exposure Time (Sec)	Test Organism	Time 0 Count/ml	UV Intensity mj/cm^2	CFU/ml After Exposure	% Reduction
22	*C. sporogenes*	4.2×10^6	*83.1/cm^2	0	100

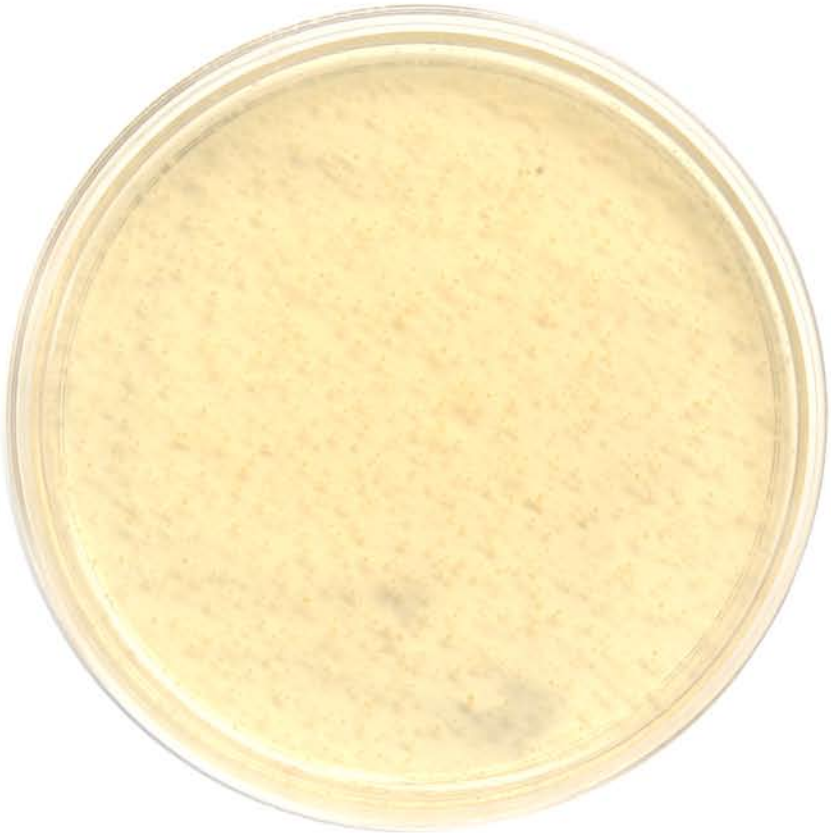
*Exposed to 42 mj of UV light, mixed and exposed to another 41.1 mj.

1-15-07
Date

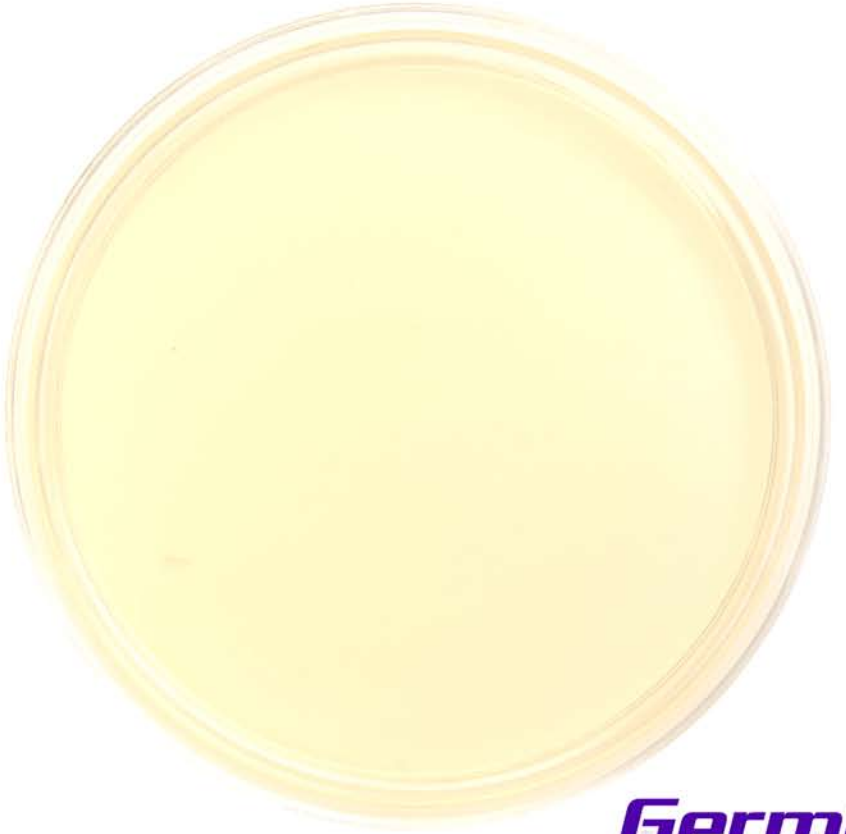
James J. Barbato, M.S., M.P.H.
President

**HEI conducted this test with a special low-power Sterilray™ lamp in order to control the amount of exposure. The lamp is 1/30 the power that will be used in the sanitation wand. This would result in an exposure of less than 0.73 seconds.

Clostridium sporogenes



Unexposed 10^{-3}



83.1 mj/cm^2

GermBuster™ Using Sterilray™ Technology