

HandGuard™

15 Second Kill Germs Test Report

Kill germs 99.99% only 15 seconds.

Challenge Organism	Units	Inoculum Count	Count/ gm Sample	15 seconds	30 seconds	3 minutes	6 minutes	9 minutes
<i>Candida albicans</i> ATCC 10231	CFU/ml % reduction	2.6 x 10 ⁶ N/A	1.3 x 10 ⁶ N/A	1.0 x10 ⁶ 23,077	9.6 x10 ⁵ 26,154	2.6 x10 ⁴ 98	2.1 x10 ⁴ 98,385	2.0 x10 ⁴ 98,061
<i>Candida glabrata</i> ATCC 25512	CFU/ml % reduction	3.6 x 10 ⁶ N/A	1.8 x 10 ⁶ N/A	1.0 x10 ⁶ 44,444	1.0 x10 ⁶ 44,444	1.4 x10 ⁵ 92,222	1.8 x10 ⁵ 90	7.2 x10 ⁴ 96
<i>Aspergillus brasiliensis</i> ATCC 16404 (formerly <i>A. niger</i>)	CFU/ml % reduction	2.5 x 10 ⁶ N/A	1.2 x 10 ⁶ N/A	1.7 x 10 ⁶ 85,833	2.8 x 10 ⁶ 76,667	9.3 x 10 ⁴ 92.25	9.5 x 10 ⁴ 92.083	8.5 x 10 ⁴ 92.917
<i>Acinetobacter baumannii</i> ATCC 19606	CFU/ml % reduction	7.3 x 10 ⁶ N/A	3.6 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Enterobacter aerogenes</i> ATCC 35029	CFU/ml % reduction	4.2 x 10 ⁶ N/A	2.1x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Enterobacter sakazakii</i> ATCC 51329	CFU/ml % reduction	8.7 x 10 ⁶ N/A	4.4 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Escherichia coli</i> ATCC 25922	CFU/ml % reduction	1.2 x 10 ⁶ N/A	6.0x 10 ⁵ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Escherichia coli</i> O157:H7 ATCC 43895	CFU/ml % reduction	4.0 x 10 ⁶ N/A	2.0 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Haemophilus influenzae</i> ATCC 19418	CFU/ml % reduction	3.2 x 10 ⁶ N/A	1.6 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Klebsiella oxytoca</i> ATCC 43165	CFU/ml % reduction	4.0 x 10 ⁶ N/A	2.0 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Klebsiella pneumoniae</i> ATCC 4352	CFU/ml % reduction	1.4 x 10 ⁶ N/A	7.0 x 10 ⁵ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Pseudomonas aeruginosa</i> ATCC 15442	CFU/ml % reduction	4.8 x 10 ⁶ N/A	2.4 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Pseudomonas aeruginosa</i> ATCC 27853	CFU/ml % reduction	3.0 x 10 ⁶ N/A	1.5 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Bacteroides fragilis</i> ATCC 25285	CFU/ml % reduction	2.8 x 10 ⁶ N/A	1.4 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Micrococcus luteus</i> ATCC 7468	CFU/ml % reduction	2.8 x 10 ⁶ N/A	1.4 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Proteus mirabilis</i> ATCC 7002	CFU/ml % reduction	4.0 x 10 ⁶ N/A	2.0 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Staphylococcus haemolyticus</i> ATCC 29970	CFU/ml % reduction	4.2 x 10 ⁶ N/A	2.1 x 10 ⁶ N/A	2.0 x10 ⁶ > 99.999				
<i>Streptococcus pyogenes</i> ATCC 19615	CFU/ml % reduction	4.0 x 10 ⁶ N/A	2.0 x 10 ⁶ N/A	< 1.0 x10 ⁶ > 99.999				
<i>Salmonella choleraesuis</i> ATCC 10708	CFU/ml % reduction	4.2 x 10 ⁶ N/A	2.1 x 10 ⁶ N/A	4.5 x10 ⁵ 99,997	2.0 x10 ⁵ > 99.999			
<i>Serratia marcescens</i> ATCC 14756	CFU/ml % reduction	2.6x 10 ⁶ N/A	1.3 x 10 ⁶ N/A	2.6 x10 ⁵ 99,98	1.6 x10 ⁵ > 99.999			
<i>Enterococcus faecalis</i> ATCC 29212	CFU/ml % reduction	3.5 x 10 ⁶ N/A	1.8 X 10 ⁶ N/A	4.5 x10 ⁵ 75	2.9 x10 ⁵ 83,889	< 1.0 x10 ⁶ > 99.999		
<i>Enterococcus faecium</i> ATCC 19434	CFU/ml % reduction	7.3 x 10 ⁶ N/A	3.6 X 10 ⁶ N/A	1.7 x10 ⁶ 52,778	1.5 x10 ⁶ 58,333	< 1.0 x10 ⁶ > 99.999		
<i>Listeria monocytogenes</i> ATCC 7644	CFU/ml % reduction	1.6 x 10 ⁶ N/A	8.0 x 10 ⁵ N/A	5.0 x10 ⁵ 99,375	1.6 x10 ⁵ 99,8	< 1.0 x10 ⁶ > 99.999		
<i>Staphylococcus hominis</i> ATCC 27844	CFU/ml % reduction	2.8 x 10 ⁶ N/A	1.4 x 10 ⁶ N/A	7.8 x10 ⁵ 99,443	4.8 x10 ⁵ 99,657	< 1.0 x10 ⁶ > 99.999		
<i>Staphylococcus epidermidis</i> ATCC 12228	CFU/ml % reduction	1.5 x 10 ⁶ N/A	7.5 x 10 ⁵ N/A	9.2 x10 ⁵ 99,877	1.8 x10 ⁵ 99,976	4.0 x10 ⁵ 99,995	< 1.0 x10 ⁶ > 99.999	
<i>Staphylococcus saprophyticus</i> ATCC 15305	CFU/ml % reduction	9.6 x 10 ⁶ N/A	4.8 x 10 ⁶ N/A	9.3 x10 ⁵ 98,062	3.9 x10 ⁵ 99,188	6.8 x10 ⁵ 99,858	< 1.0 x10 ⁶ > 99.999	
<i>Streptococcus pneumoniae</i> ATCC 6302	CFU/ml % reduction	3.4 x 10 ⁶ N/A	1.7 x 10 ⁶ N/A	1.3 x10 ⁶ 99,235	2.6 x10 ⁵ 99,87	2.0 x10 ⁶ 99,998	< 1.0 x10 ⁶ > 99.999	
<i>Staphylococcus aureus</i> ATCC 29213	CFU/ml % reduction	4.9 x 10 ⁶ N/A	2.4 x 10 ⁶ N/A	1.8 x10 ⁶ 99,25	4.0 x10 ⁵ 99,833	9.4 x10 ⁵ 99,961	2.6 x10 ⁵ 99,998	1.4 x10 ⁵ > 99.999
<i>Staphylococcus aureus</i> MRSA ATCC 33592	CFU/ml % reduction	7.3 x 10 ⁶ N/A	3.6 x 10 ⁶ N/A	2.0 x10 ⁶ 99,444	1.2 x10 ⁶ 99,667	6.4 x10 ⁵ 99,822	3.5 x10 ⁵ 99,99	1.8 x10 ⁵ > 99.999

HandGuard™

Germ Reduction In 30 Seconds Test Report

99.999% germs reduction in 30 seconds.
**(Klebsiella pneumoniae, E. coli, Haemophilus influenzae,
 Pseudomonas aeruginosa, Pseudomonas)**

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FINAL REPORT



Date Received: 12/07/2011
 Date Tested: 12/08/2011
 Date Completed: 12/22/2011
 Report Completed: 12/22/2011

Revision: 0 Revision Date: N/A

PO #: N/A
 Quote #: 2011-12-02-01-R0

PDA Service Code: 036	Service Description: Kill Time Assay
Sample Description: (1) clear plastic bottle containing liquid	Purpose: Bacterial Kill Time Testing

RESULTS: See results table.

PDA Sample ID	Sample Description	Challenge Organism	Results Table				
			Inoculum Count (cfu/ml in inoculum media)	0 Time (cfu/ml in product)	15 Sec (cfu/ml in product)	30 seconds (cfu/ml in product)	6 minutes (cfu/ml in product)
115035014261	HandGuard	Pseudomonas aeruginosa ATCC #6027	8.8 X 10E8	7.8 X 10E7	< 1.0X10E1	< 1.0X10E1	N/A
115035014262	HandGuard	Escherichia coli ATCC #8739	7.4 X 10E8	4.5 X 10E8	< 1.0X10E1	< 1.0X10E1	N/A
115035014263	HandGuard	Salmonella enterica ATCC #14028	8.5 X 10E8	4.3 X 10E8	< 1.0X10E1	< 1.0X10E1	N/A
115035014264	HandGuard	Staphylococcus aureus ATCC #8328	8.1 X 10E8	7.8 X 10E7	N/A	1.4 X 10E2	< 1.0X10E1

cfu = Colony Forming Units N/A = Not Applicable ND = Not Detected

Respectfully Submitted,

PDA LABORATORIES, INC.

Artur Lewandowski

Quality Assurance Audit By: MB, 12/22/2011

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HandGuard™

ECOCERT/ USDA Test Report

ECOCERT/ USDA Organic Certification ingredient standard.



Category of certification: NOP "made with organic" product (205.301c)



Once certified, a production or handling operation's organic certification continues in effect until surrendered, suspended or revoked. A certification operation must annually request the continuation of its certification by following the section 205.406 of the NOP.

Marketing of the following products are compliant to the following organic standards:

ECOCERT / USDA

ECOCERT SA after inspection hereby confirms that the products listed below and produced and commercialized under responsibility of the Licensee are certified Organic under the US National Organic Program 7 CFR Part 205.

Any reference of the organic production made has to respect the rules a determined by Sub part D of the Rule. Any other rules of labeling as determined by national food acts have to be followed. The Product labeling may refer to the inspection by ECOCERT SA as follows:

"NOP organic certified by ECOCERT SA, F-32600"

Accredited by the USDA effective 29 April 2002.
Ecocert ICO LLC, PO Box 158 Plainfield, Indiana 46168 USA.

ECOCERT SA BP47, 32600 L'Isle Jourdain, France

