



MicroArmor RTU Disinfectant Efficacy Testing

BACTERIALCIDAL

Organism	Carrier Population	Sample	# Carriers	# Positive
Pseudomonas aeruginosa ATCC #15442	2.3 X 10 ⁶ CFU/Carrier	A	60	0/60
	1.7 X 10 ⁶ CFU/Carrier	B	60	0/60
	1.3 X 10 ⁶ CFU/Carrier	C	60	1/60
Salmonella enterica ATCC #10708	1.1 X 10 ⁵ CFU/Carrier	A	60	0/60
	1.5 X 10 ⁶ CFU/Carrier	B	60	0/60
	2.1 X 10 ⁶ CFU/Carrier	C	60	0/60
Staphylococcus aureus ATCC #6538	1.5 X 10 ⁶ CFU/Carrier	A	60	0/60
	1.4 X 10 ⁶ CFU/Carrier	B	60	0/60
	4.7 X 10 ⁵ CFU/Carrier	C	60	0/60

This product is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum (850 ppm active)
Treated surfaces must remain wet for 10 minutes

Burkholderia cepacia ATCC 25416	3.5 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
Campylobacter jejuni ATCC 29428	2.9 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Corynebacterium ammoniagenes ATCC 6871	1.8 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Enterobacter aerogenes ATCC 13048	4.1 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
Enterobacter cloacae Clinical Isolate	3.9 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Enterococcus faecalis ATCC 19433	9.4 X 10 ⁴ CFU/Carrier	A	10	0/10
		B	10	0/10

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Enterococcus faecalis ATCC 19433	9.4 X 10 ⁴ CFU/Carrier	A	10	0/10
		B	10	0/10
Enterococcus faecium Vancomycin Resistant (VRE)	4.5 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Escherichia coli ATCC 11229	3.2 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Escherichia coli Antibiotic Resistant Clinical Isolate	3.9 X 10 ⁵ CFU/Carrier	A	20	0/20
		B	20	0/20
Escherichia coli 0157:H7 ATCC 35150	1.1 X 10 ⁴ CFU/Carrier	A	20	0/20
		B	20	0/20
Klebsiella pneumoniae ATCC 4352	9.9 X 10 ⁴ CFU/Carrier	A	10	0/10
		B	10	0/10
Klebsiella pneumoniae Antibiotic Resistant Clinical Isolate	2.7 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Legionella pneumophila ATCC 33153	8.2 X 10 ⁷ CFU/Carrier	A	10	0/10
		B	10	0/10
Listeria monocytogenes ATCC 984	1.85 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Proteus mirabilis Clinical Isolate	1.9 X 10 ⁶ CFU/Carrier	A	20	0/20
		B	20	0/20
Proteus vulgaris ATCC 33420	4.55 X 10 ⁴ CFU/Carrier	A	20	0/20
		B	20	0/20
Pseudomonas aeruginosa Clinical Isolate	1.2 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
Salmonella typhi ATCC 6539	5.1 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Serratia marcescens ATCC 43861	1.5 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Shigella dysenteriae ATCC 9361	5.45 X 10 ⁴ CFU/Carrier	A	10	0/10
		B	10	0/10
Shigella flexneri ATCC 12022	4.85 X 10 ⁴ CFU/Carrier	A	20	0/20
		B	20	0/20

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Shigella sonnei ATCC 9290	2.75 X 10 ⁴ CFU/Carrier	A	20	0/20
		B	20	0/20
Staphylococcus aureus (Methicillin Resistant) (MRSA) ATCC 33591	1.45 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Staphylococcus epidermidis Antibiotic Resistant Clinical Isolate	4.2 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Streptococcus pyogenes ATCC 19615	3.35 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
Vibrio cholera ATCC 11623	9.3 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10

Testing is performed per the AOAC UDT/GST method. Ten carriers are required on 2 separate lots against each supplemental organism. Killing of 10 out of 10 carriers is required (total carriers = 20)

VIRUCIDAL

Organism	Carrier Population	Sample	Carriers	# Positive
Hepatitis B Virus	5.5 Log ₁₀	A	<1.5 Log ₁₀	>4.0 Log ₁₀
	5.5 Log ₁₀	B	<1.5 Log ₁₀	>4.5 Log ₁₀
	4.5 Log ₁₀	Confirmatory A	<1.5 Log ₁₀	>3.0 Log ₁₀
Hepatitis C Virus ATCC CCL-22	6.84 Log ₁₀	A	<1.51 Log ₁₀	>5.33 Log ₁₀
	6.84 Log ₁₀	B	<1.51 Log ₁₀	>5.33 Log ₁₀
	7.14 Log ₁₀	Confirmatory A	<1.7 Log ₁₀	>5.44 Log ₁₀
Herpes Simplex Type 1 ATCC VR-260	5.0 Log ₁₀	A	<1.5 Log ₁₀	>3.5 Log ₁₀
		B	<1.5 Log ₁₀	>3.5 Log ₁₀
Herpes Simplex Type 2 ATCC VR-734	5.0 Log ₁₀	A	<1.5 Log ₁₀	>3.5 Log ₁₀
		B	<1.5 Log ₁₀	>3.5 Log ₁₀
Human Coronavirus ATCC VR-740	4.75 Log ₁₀	A	<1.5 Log ₁₀	>3.25 Log ₁₀
		B	<1.5 Log ₁₀	>3.25 Log ₁₀
Human Immunodeficiency Virus type 1 (HIV 1) HTLV-IIIRF	6.5 Log ₁₀	A	<2.5 Log ₁₀	>4.0 Log ₁₀
		B	<2.5 Log ₁₀	>4.0 Log ₁₀
Influenza A/Brazil Virus	4.5 Log ₁₀	A	<0.5 Log ₁₀	>4.3 Log ₁₀
		B	<0.5 Log ₁₀	>4.3 Log ₁₀

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Organism	Carrier Population	Sample	Carriers	# Positive
Respiratory syncytial virus ATCC VR-26, Strain Long	4.5 Log10	A	<1.5 Log10	>3.0 Log10
		B	<1.5 Log10	>3.0 Log10
Vaccinia virus	5.5 Log10	A	<1.5 Log10	>4.0 Log10
		B	<1.5 Log10	>4.0 Log10

This product was evaluated in the presence of 5% serum (850 ppm quat active), with a 10 minute contact time and found to be effective against the following viruses on hard nonporous environmental surfaces.

FUNGICIDAL

Organism	Carrier Population	Sample	# Carriers	# Positive
Candida albicans ATCC #10231	4.2 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
Trichophyton mentagrophytes ATCC #9533	6.6 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10

This product was evaluated at 2 ounces per gallon in the presence of 5% serum and 400 ppm hard water with a 10 minute contact time and found to be effective against the following fungi on hard nonporous environmental surfaces.

MOLD AND MILDEW CONTROL

Organism	Tile Number	Untreated After 7 Days	Sample A After 7 Days	Sample B After 7 Days
Aspergillus niger ATCC #6275	1	Growth 100%	No Growth 0%	No Growth 0%
	2	Growth 100%	No Growth 0%	No Growth 0%
	3	Growth 80%	No Growth 0%	No Growth 0%
	4	Growth 100%	No Growth 0%	No Growth 0%
	5	Growth 80%	No Growth 0%	No Growth 0%
	6	Growth 80%	No Growth 0%	No Growth 0%
	7	Growth 80%	No Growth 0%	No Growth 0%
	8	Growth 80%	No Growth 0%	No Growth 0%
	9	Growth 80%	No Growth 0%	No Growth 0%
	10	Growth 80%	No Growth 0%	No Growth 0%

Use this product to control the growth of mold and mildew and their odors on hard, non-porous surfaces. Thoroughly wet all treated surfaces completely. Let air-dry. Repeat application weekly or when growth or odor reappears.