



Disinfectant Cleaner
and Odor Counteractant

Efficacy
Data

EPA REG. # 10324-167-44089

Efficacy

Hospital Disinfection (at 4 ounces)

AIRX 15 is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum at 4 ounces of this product per gallon of water (488 ppm active). Treated surfaces must remain wet for 10 minutes. (Testing is performed per the AOAC UDT/GST method (DIS/TSS-1). Sixty carriers are required on 3 separate lots, one of which must be > 60 days old against *Pseudomonas aeruginosa*, *Salmonella enterica* and *Staphylococcus aureus*. Killing of 59 out of 60 carriers is required (total carriers = 540).)

ORGANISM	CARRIER POPULATION	SAMPLE	# CARRIERS	# POSITIVE
<i>Pseudomonas aeruginosa</i> ATCC #15442	5.6 X 10 ⁴ CFU/Carrier	A	60	1/60
		(60 Days Old)		
		B	60	1/60
<i>Salmonella enterica</i> ATCC #10708	1.28 X 10 ⁵ CFU/Carrier	C	60	1/60
		(60 Days Old)		
		A	60	1/60
<i>Staphylococcus aureus</i> ATCC #6538	2.0 X 10 ⁵ CFU/Carrier	B	60	0/60
		(60 Days Old)		
		C	60	0/60
<i>Staphylococcus aureus</i> ATCC #6538	2.0 X 10 ⁵ CFU/Carrier	A	60	0/60
		(60 Days Old)		
		B	60	0/60
<i>Staphylococcus aureus</i> ATCC #6538	2.0 X 10 ⁵ CFU/Carrier	C	60	0/60
		(60 Days Old)		
		A	60	0/60

Supplemental Organisms

(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).)

ORGANISM	CARRIER POPULATION	SAMPLE	# CARRIERS	# POSITIVE
<i>Corynebacterium ammoniagenes</i> ATCC 6872	1.22 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Enterococcus faecalis</i> ATCC 29212	9.4 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Enterococcus faecalis</i> Vancomycin Resistant (VRE) ATCC 51299	9.7 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Escherichia coli</i> ATCC 11229	8.7 X 10 ⁸ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Klebsiella pneumoniae</i> ATCC 4352	1.92 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Legionella pneumophila</i> ATCC 33153	1.45 X 10 ⁶ CFU/Carrier	A	10	0/10
	4.5 X 10 ⁷ CFU/Carrier	B	10	0/10
<i>Proteus mirabilis</i> ATCC 9240	2.2 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Salmonella schottmuelleri</i> ATCC 8759	1.03 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Serratia marcescens</i> ATCC 14756	6.9 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10



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ORGANISM	CARRIER POPULATION	SAMPLE	# CARRIERS	# POSITIVE
<i>Shigella dysenteriae</i> ATCC 11835	1.14 X 10 ⁶ CFU/Carrier	A	10	0/10
	1.89 X 10 ⁶ CFU/Carrier	B	10	0/10
<i>Staphylococcus aureus</i> (Methicillin Resistant) ATCC 33592	6.4 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
Community Associated Methicillin Resistant <i>Staphylococcus</i> (CA-MRSA) (NRS 123) (Genotype USA400)	4.2 X 10 ⁶ CFU/Carrier	A	10	0/10
		B	10	0/10
<i>Streptococcus salivarius</i> ATCC 7073	3.1 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10

Virucidal against (at 4 ounces)

AIRX 15 was evaluated at 4 ounces per gallon use level (488 ppm quat active), in the presence of 5% serum with a 10 minute contact time (≠ 2 minute contact time for *Human Immunodeficiency Virus Type 1 (HIV-1) (AIDS Virus)*) and found to be effective against the following viruses on hard nonporous environmental surfaces.

(Testing is performed per EPA Guidance (DIS/TSS-7). Two separate lots are tested. Inactivation of virus must be demonstrated at all dilutions when no cytotoxicity is observed or at all dilutions above the cytotoxic level when it is observed. The data must demonstrate a 3-log reduction in viral titer for both lots.)

ORGANISM	DRIED VIRUS CONTROL	SAMPLE	RESULT	LOG REDUCTION
Avian Influenza A (H5N1) virus	5.0 Log ₁₀	A	≤0.5 Log ₁₀	≥4.75 Log ₁₀
		B	≤0.5 Log ₁₀	≥4.75 Log ₁₀
Herpes Simplex Virus Type 1 ATCC VR-773	4.75 Log ₁₀	A	≤0.5 Log ₁₀	≥4.25 Log ₁₀
		B	≤0.5 Log ₁₀	≥4.25 Log ₁₀
Herpes Simplex Virus Type 2 ATCC VR-734	4.5 Log ₁₀	A	≤0.5 Log ₁₀	≥4.0 Log ₁₀
		B	≤0.5 Log ₁₀	≥4.0 Log ₁₀
Human Coronavirus ATCC VR-740	4.75 Log ₁₀	A	≥0.5 Log ₁₀	≤4.25 Log ₁₀
		B	≤0.5 Log ₁₀	≥4.25 Log ₁₀
≠ Human Immunodeficiency Virus type 1 (HIV 1) HTLV-III _B	4.75 Log ₁₀	A	≤1.5 Log ₁₀	≥3.25 Log ₁₀
		B	≤1.5 Log ₁₀	≥3.25 Log ₁₀
Influenza A virus (H3N2) (Hong Kong Strain) ATCC VR-544	5.5 Log ₁₀	A	≤0.5 Log ₁₀	≥5.0 Log ₁₀
		B	≤0.5 Log ₁₀	≥5.0 Log ₁₀
Influenza A (H1N1) virus ATCC VR-1469	6.0 Log ₁₀	A	≤1.5 Log ₁₀	≥4.5 Log ₁₀
		B	≤1.5 Log ₁₀	≥4.5 Log ₁₀
Vaccinia virus ATCC VR-119	5.5 Log ₁₀	A	≤1.5 Log ₁₀	≥4.0 Log ₁₀
		B	≤1.5 Log ₁₀	≥4.0 Log ₁₀

Virucidal against (at 6 ounces)

AIRX 15 was evaluated at 6 ounces per gallon use level (732 ppm quat active), in the presence of 5% serum with a 10 minute contact time and found to be effective against the following viruses on hard nonporous environmental surfaces.



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ORGANISM	DRIED VIRUS CONTROL	SAMPLE	RESULT	LOG REDUCTION
Hepatitis B Virus	6.84 Log ₁₀	A	≤1.78 Log ₁₀	≥5.06 Log ₁₀
	6.84 Log ₁₀	B	≤2.05 Log ₁₀	≥4.79 Log ₁₀
	7.14 Log ₁₀	Confirmatory A	≤2.35 Log ₁₀	≤4.79 Log ₁₀
Hepatitis C Virus ATCC CCL-22	6.84 Log ₁₀	A	≤1.28 Log ₁₀	≥5.56 Log ₁₀
	6.84 Log ₁₀	B	≤1.05 Log ₁₀	≥5.79 Log ₁₀
	6.85 Log ₁₀	Confirmatory B	≤1.06 Log ₁₀	≥5.79 Log ₁₀

Fungicidal against

AIRX 15 was evaluated at 4 ounces per gallon with a 10 minute contact time and found to be effective against the following fungi on hard nonporous environmental surfaces.

(Testing is performed per the AOAC fungicidal method (DIS/TSS-6). Two separate lots are tested against *Trichophyton mentagrophytes* in a suspension test. Killing of all fungal spores in 10 minutes is required.)

ORGANISM	CARRIER POPULATION	SAMPLE	# CARRIERS	# POSITIVE
<i>Trichophyton mentagrophytes</i> ATCC #9533	9.7 X 10 ⁵ CFU/Carrier	A	10	0/10
		B	10	0/10

Mold and Mildew Control

Use AIRX 15 at 4 ounces per gallon 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.

ORGANISM	TILE NUMBER	UNTREATED AFTER 7 DAYS	SAMPLE A AFTER 7 DAYS	SAMPLE B AFTER 7 DAYS
<i>Aspergillus niger</i> ATCC #6275	1	Growth 95%	No Growth 0%	No Growth 0%
	2	Growth 90%	No Growth 0%	No Growth 0%
	3	Growth 90%	No Growth 0%	No Growth 0%