

Efficacy Bulletin

Acid Sanitizer FP

EPA Reg. No. 10327-67-5741

General Disinfection

This product is bactericidal according to the AOAC Use Dilution Test method on hard inanimate surfaces modified in the presence of 5% organic serum and 400 ppm hard water at 1 ounce of this product to gallon of water. 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, *Salmonella enterica* and *Staphylococcus aureus*. Killing of 59 out of 60 carriers is required (total carriers = 360).

Organism	Carrier Population	Sample	#Carriers	#Positive
<i>Salmonella enterica</i> ATCC #10708	1.22 X 10 ⁷ CFU/ Carrier	A (60 Days Old)	60	1/60
		B	60	0/60
	8.6 X 10 ⁶ CFU/ Carrier	C	60	0/60
<i>Staphylococcus aureus</i> ATCC #6538	9.5 X 10 ⁶ CFU/ Carrier	A (60 Days Old)	60	0/60
		B	60	0/60
		C	60	0/60

Virucidal against

This product was evaluated at 1 ounce per gallon use level (800 ppm quat active), 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 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 (3 lots for Canada)

Organism	Dried Virus Control	Sample	Result	Log Reduction
<i>Avian influenza A</i> ATCC VR-2072	5.0 Log10	A	≤1.5 Log10	≥3.5 Log10
		B	≤1.5 Log10	≥3.5 Log10
<i>Avian Reovirus</i> ATCC VR-2449	4.5 Log10	A	≤0.5 Log10	≥4.0 Log10
		B	≤0.5 Log10	≥4.0 Log10
<i>Infectious Bronchitis Virus</i> Strain BeaudetteIB42	5.5 Log10	A	≤0.5 Log10	≥5.0 Log10
		B	≤0.5 Log10	≥5.0 Log10
<i>Infectious Laryngotracheitis Virus (LT) Strain</i> LT-IVAX	5.0 Log10	A	≤0.5 Log10	≥4.5 Log10
		B	≤0.5 Log10	≥4.5 Log10
<i>Newcastle disease virus</i> ATCC VR-108	4.75 Log10	A	≤0.5 Log10	≥4.25 Log10
		B	≤0.5 Log10	≥4.25 Log10

CaCO₃) according to the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants test.

Testing is performed per the AOAC method (AOAC Germicidal and Detergent Sanitizers) on 3 separate lots, one of which must be ≥ 60 days old, against both *Escherichia coli* and *Staphylococcus aureus*. Acceptable results must demonstrate a 99.999% reduction in the number of test microorganisms within 30 seconds.

Organism	Initial Organism Population	Sample	30 Second Kill CFU/ml	Percent Kill
<i>Escherichia coli</i> ATCC #11229	1.3 X 10 ⁸ CFU/Carrier	A	<10	>99.999
		B	<10	>99.999
		C	<10	>99.999
<i>Staphylococcus aureus</i> ATCC #6538	8.7 X 10 ⁷ CFU/Carrier	A	10	99.999
		B	6.3	99.999
		C	<10	>99.999
<i>Campylobacter jejuni</i> ATCC #29428	1.86 X 10 ⁷ CFU/Carrier	A	0	100 (Complete)
		B	0	100 (Complete)
<i>Escherichia coli</i> O157:H7 ATCC #43888	9.7 X 10 ⁷ CFU/Carrier	A	65	99.9999
		B	166	99.9998
<i>Listeria monocytogenes</i> ATCC #984	8.22 Log ₁₀	A	2.37 Log ₁₀	>5.85 Log ₁₀
		B	2.32 Log ₁₀	>5.90 Log ₁₀
<i>Salmonella enterica</i> ATCC #10708	7.95 Log ₁₀	A	<1.0 Log ₁₀	>6.95 Log ₁₀
		B	<1.0 Log ₁₀	>6.95 Log ₁₀
<i>Shigella dysenteriae</i> ATCC #9361	7.87 Log ₁₀	A	0 Log ₁₀	100 (Complete)
		B	0 Log ₁₀	100 (Complete)
<i>Shigella flexneri</i> ATCC #9380	8.0 X 10 ⁷ CFU/Carrier	A	11	99.9999
		B	451	99.9994
<i>Yersinia enterocolitica</i> ATCC #23715	7.88 Log ₁₀	A	0 Log ₁₀	100 (Complete)
		B	0 Log ₁₀	100 (Complete)

Non-Food Contact Surface Sanitizer

Add ¼ ounce of this product to 1 gallon of water to sanitize hard porous and nonporous non-food contact surfaces. Treated surfaces must remain wet for 5 minutes. Then wipe with sponge, mop or cloth or allow to air dry. At this dilution food contact surfaces must be rinsed.

Testing is performed per EPA Guidance (DIS/TSS-10). Three lots are required, one of which must be \geq 60 days old. Testing is performed against *Staphylococcus aureus* and *Klebsiella pneumoniae* containing 5% organic load. *Enterobacter aerogenes* may be substituted for *Klebsiella pneumoniae*. The results must show a reduction of at least 99.9% in the number of each test microorganism over the parallel control count within 5 minutes.

Organism	Carrier Population	Sample	5 Minute Kill CFU/Carrier	Percent Reduction
<i>Enterobacter aerogenes</i> ATCC 13048	6.50 Log10	A (60 Days)	>5.1 Log10	>99.99
		B	>5.1 Log10	>99.99
		C	>5.1 Log10	>99.99
<i>Staphylococcus aureus</i> ATCC #6538	6.06 Log10	A (60 Days)	4.26 Log10	99.99
		B	4.08 Log10	99.99
		C	4.26 Log10	99.99