

SUHODISIN

HOSPITAL DISINFECTANT

VIRUCIDAL ACTIVITY

Test Method: *U.S. EPA Pesticide Assessment Guidelines, Subdivision G: Product Performance, 1982, Section 91-30, pp. 72-76.
†Virucide Assay (EPA, Federal Register 10, No. 123, 6/25/75, p. 26836)
■ Protocols for Testing the Efficacy of Disinfectants against Hepatitis B Virus (HBV) (EPA, Federal Register, Vol. 65, No. 166, 8/25/2000, p. 51828).
‡ Protocol for Testing Disinfectants against Hepatitis C Virus using Bovine Viral Diarrhea Virus as approved by the U.S. EPA on August 15, 2002.

Test Conditions: 2 oz/gal dilution, 10 minute contact time - glass petri dish substrates - tested in the presence of serum.
Results:

Test Organism	Sample	Titer Reduction
†Adenovirus Type 2	A&B	3.0 log ¹⁰ >3.0 log ¹⁰
*Avian Influenza A Virus (H3N2) (Avian Reassortant) (ATCC VR-2072)	A&B	≥3.5 log ¹⁰ ≥3.5 log ¹⁰
*Avian Influenza Virus, Type A (Turkey/WIS/66) (H9N2)	A&B	≥4.5 log ¹⁰ ≥4.5 log ¹⁰
‡Bovine Viral Diarrhea Virus (BVDV)	A&B	6.1 log ¹⁰ 3.8 log ¹⁰
*Feline Calicivirus (FCV)	A&B	5.79 log ¹⁰ >6.06 log ¹⁰
■ Hepatitis B Virus (HBV) (Duck Hepatitis B Virus-DHBV)	A&B	4.5 log ¹⁰ 4.5 log ¹⁰
‡Hepatitis C Virus (HCV) (Bovine Viral Diarrhea Virus-BVDV)	A&B	6.1 log ¹⁰ 3.8 log ¹⁰
†Herpes Simplex Type (Sabin)	A&B	≥4.0 log ¹⁰ ≥3.7 log ¹⁰
*Human Coronavirus (ATCC VR-740, strain 229E)	A&B	≥3.0 log ¹⁰ ≥3.0 log ¹⁰
*Human Immunodeficiency Virus, HTLV-III _{RF} , strain of HIV-1 (associated with AIDS)	A&B	≥3.0 log ¹⁰ ≥3.0 log ¹⁰
†Influenza A2 (Japan 305/57)	A&B	>6.5 log ¹⁰ >6.0 log ¹⁰
*Norovirus (Norwalk Virus) (FCV)	A&B	5.79 log ¹⁰ >6.06 log ¹⁰
†Pandemic 2009 H1N1 Influenza A Virus	A&B	(Refer to NOTE below.)
*Porcine Respiratory & Reproductive Syndrome Virus (PRRSV) (Strain NVSL)	A&B	≥4.75 log ¹⁰ ≥4.75 log ¹⁰
*SARS Associated Coronavirus (ZeptoMetrix)	A&B	4.03 log ¹⁰ 4.03 log ¹⁰
†Vaccinia (Wyeth)	A&B	>3.5 log ¹⁰ >3.5 log ¹⁰

Conclusion: Under the conditions of this investigation, SUHODISIN HOSPITAL DISINFECTANT demonstrated **virucidal** activity against Adenovirus Type 2, Avian Influenza A Virus (H3N2), Avian Influenza Virus Type A (H9N2), Bovine Viral Diarrhea Virus (BVDV), Feline Calicivirus (FCV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), Herpes Simplex Type 1, Human Coronavirus, Human Immunodeficiency Virus (HIV), Influenza A2, Norovirus (Norwalk Virus), Pandemic 2009 H1N1 Influenza A Virus, Porcine Respiratory & Reproductive Syndrome Virus (PRRSV), SARS Associated Coronavirus and Vaccinia according to criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a virucide.
NOTE: Per EPA guidance document dated October 21, 2009, disinfectant products that bear label claims against human, avian, or swine influenza A virus, and have submitted and received approval of efficacy data to support these label claims, may include a label claim against the Pandemic 2009 H1N1 Influenza A Virus.

MILDEW FUNGISTATIC DATA:

Test Method: Hard Surface Mildew Fungistatic Test (Unofficial Protocol, 10/27/706)

Test Organisms: *Aspergillus niger* (ATCC 6275)

Test Conditions: tile substrates

Results:

Sample	Dilution	No. of Exposed Tiles	No. of Tiles Showing Growth
Suhodisin	2 oz/gal	10	0
Control	-	10	10

Conclusion: Under the conditions of this investigation, SUHODISIN HOSPITAL DISINFECTANT demonstrated **fungistatic** activity against *Aspergillus niger* according to criteria established by the U. S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungistat.

FUNGICIDAL DATA:

Test Method: AOAC Fungicidal Test

Test Organisms: *Trichophyton mentagrophytes* (ATCC 9533)

Test Conditions: 2 oz/gal dilution

5% organic soil load
20°C exposure temperature

Results:

Exposure Time (min.) vs. Growth			
Sample	5	10	15
A	+	0	0
B	+	0	0

Conclusion: Under the conditions of this investigation, SUHODISIN HOSPITAL DISINFECTANT demonstrated **fungicidal** activity against *Trichophyton mentagrophytes* according to criteria established by the U. S. Environmental Protection Agency for registration and labeling of a disinfectant product as a fungicide.

DISINFECTION DATA:

Test Method: AOAC Use Dilution

Test Conditions: 2 oz/gal dilution 5% organic soil load, 10 minute contact time, stainless steel carrier substrates, 20°C exposure temperature.

Results:

Test Organisms	No. of Carriers		
	Sample	Exposed	Positive
<i>Staphylococcus aureus</i> (ATCC 6538)	A	60	0
	B	60	0
	C	60	0
<i>Salmonella enterica</i> (ATCC 10708)	A	60	0
	B	60	0
	C	60	0
<i>Pseudomonas aeruginosa</i> (ATCC 15442)	A	60	0
	B	60	0
	C	60	0
<i>Acinetobacter baumannii</i> (ATCC 19606)	A	10	0
	B	10	0
<i>Brevibacterium ammoniagenes</i> (ATCC 6871)	A	10	0
	B	10	0
<i>Enterobacter aerogenes</i> (ATCC 13048)	A	10	0
	B	10	0
<i>Escherichia coli</i> (ATCC 11229)	A	10	0
	B	10	0



- *Virucide
- Fungicide
- Bactericide
- Deodorizer
- Mildewstat

Efficacy Data

EPA REG. NO. 1839-95-72072

EPA EST. NO. 1459-PA-01



Product Code: BS320-01

<i>Klebsiella pneumoniae</i> (ATCC 4352)	A	10	0
	B	10	0
<i>Klebsiella pneumoniae</i> New Delhi Metallo-Beta Lactamase (NDM-1) Carbapenem Resistant	A	10	0
	B	10	0
Methicillin resistant <i>Staphylococcus aureus</i> (MRSA) (ATCC 33593)	A	10	0
	B	10	0
<i>Salmonella schottmuelleri</i> (ATCC 8759)	A	10	0
	B	10	0
<i>Shigella dysenteriae</i> (ATCC 12180)	A	10	0
	B	10	0
<i>Streptococcus faecalis</i> (ATCC 10541)	A	10	0
	B	10	0
<i>Streptococcus pyogenes</i> (Clinical-Flesh Eating strain, BIRD M3)	A	10	0
	B	10	0
<i>Streptococcus salivarius</i> (ATCC 9222)	A	10	0
	B	10	0
Vancomycin intermediate resistant <i>Staphylococcus aureus</i> (VISA) (HIP 5836)	A	10	0
	B	10	0
Vancomycin resistant <i>Enterococcus faecalis</i> (VRE) (ATCC 51299)	A	10	0
	B	10	0

Conclusion: Under the conditions of these investigations, SUHODISIN HOSPITAL DISINFECTANT demonstrated **disinfectant** activity against *Staphylococcus aureus*, *Salmonella enterica*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Brevibacterium ammoniagenes*, *Enterobacter aerogenes*, *Escherichia coli*, *Klebsiella pneumoniae*, *Klebsiella pneumoniae* New Delhi Metallo-Beta Lactamase (NDM-1) Carbapenem Resistant, Methicillin resistant *Staphylococcus aureus* (MRSA), *Salmonella schottmuelleri*, *Shigella dysenteriae*, *Streptococcus faecalis*, *Streptococcus pyogenes* (Clinical-Flesh Eating strain, BIRD M3), *Streptococcus salivarius* and Vancomycin intermediate resistant *Staphylococcus aureus* (VISA) and Vancomycin resistant *Enterococcus faecalis* (VRE) according to criteria established by the U. S. Environmental Protection Agency for registration and labeling of a disinfectant product as a bactericide.

BACTERICIDAL STABILITY DATA OF USE-SOLUTION:

Test Method: Use Dilution

Test Conditions: 2 oz/gal dilution 5% organic soil load, 10 minute contact time, stainless steel carrier substrates, deionized water, 20°C exposure temperature

Storage Conditions: sealed containers at room temperature

Results:

Test Time	Sample	Test Organisms	No. of Carriers	
			Exposed	Positive
Zero Time	A	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
	B	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
Week 1	A	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
	B	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
Week 2	A	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
	B	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
Week 3	A	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
	B	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
Week 4	A	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0
	B	<i>Staphylococcus aureus</i> (ATCC 6538)	10	0
		<i>Salmonella enterica</i> (ATCC 10708)	10	0
		<i>Pseudomonas aeruginosa</i> (ATCC 15442)	10	0

Conclusion: The results of this investigation show that a 2 oz/gal use dilution of SUHODISIN HOSPITAL DISINFECTANT will demonstrate **disinfectant** efficacy against *Staphylococcus aureus*, *Salmonella enterica*, and *Pseudomonas aeruginosa* for up to 4 weeks in accordance with criteria established by the U.S. Environmental Protection Agency for registration and labeling of a disinfectant product as a bactericide.

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