

ADVANTAGE 100

10, 1974
STREETS 100-1000
MAY 1974



EFFECTIVE
FOR USE IN
HOSPITALS AS
STAPHYLOCIDAL
PSEUDOMONACIDAL
BACTERICIDAL
FUNGICIDAL
TUBERCULOCIDAL
VIRUCIDAL*



IN SOFT OR HARD WATER
(A.O.A.C. - 500 ppm HARDNESS AS
CALCIUM CARBONATE) RETAINS EFFEC-
TIVENESS OF ELECTRICALLY CONDUCTIVE
FLOORS.



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BACTERICIDAL EFFICIENCY AT 1:128 (1 oz/gal)

PROCEDURE: The sample was tested in conformance with the Use Dilution Test Method, A.O.A.C., 11th Edition, Chapter 4, 4.007-4.011 adding the criterion of hard water by diluting the sample with A.O.A.C. synthetic hard water of 500 ppm hardness as calcium carbonate.

CONCLUSION: Complete kill was obtained when the product is used at the recommended use dilution of 1:128 on both the official I.P.A. Required Bacteria and other clinically significant bacteria.

ATCC#	Bacteria	Pos. Tubes	Neg. Tubes	Gram Reaction	Appearance of bacteria	Other Clinically Significant Bacteria					
						ATCC#	Bacteria	Pos. Tubes	Neg. Tubes		
I.P.A. Required Bacteria						14154	<i>Staphylococcus aureus</i> , antibiotic resistant	0	10	+	coccus
6538	<i>Staphylococcus aureus</i>	0	60	+	coccus	6539	<i>Salmonella typhosa</i>	0	10		rod
PRP 10						11229	<i>Escherichia coli</i>	0	10		rod
15442	<i>Pseudomonas aeruginosa</i>	0	30		rod	8043	<i>Streptococcus fecalis</i>	0	10	+	coccus
10708	<i>Salmonella choleraesuis</i>	0	30		rod	8427	<i>Proteus vulgaris</i>	0	10		rod
						6303	<i>Diplococcus pneumoniae</i>	0	10	+	coccus
						9342	<i>Streptococcus hemolyticus</i>	0	10	+	coccus

• Positive tubes indicate growth and lack of kill
• Negative tubes indicate no growth and complete kill

Further phenol coefficient confirmation was obtained through duplication of the above tests on the I.P.A. Required Bacteria on two additional batch samples.

In addition chemical and germicidal stability has been confirmed by successfully testing 60 day shelf life samples against *S. aureus* 6538.

PROCEDURE: The phenol coefficient of the sample was determined in conformance with the Phenol Coefficient Method A.O.A.C., 11th Edition, Chapter 4, 4.001-4.006 adding the criterion of hard water by diluting the sample with A.O.A.C. synthetic hard water of 500 ppm hardness as calcium carbonate. The bacteria employed were

Staphylococcus aureus ATCC 6538 and *Salmonella typhosa* ATCC 6539.

CONCLUSION: Duplicate test results support the conservative phenol coefficient claims of *Salmonella typhosa* 11:1 *Staphylococcus aureus* 10:0

Sample Identification	Organism	Critical Killing Dilution Sample	Phenol	Phenol Coefficient
Sample 1	<i>S. aureus</i>	1:805	1:70	11.5
Sample 2	<i>S. aureus</i>	11:605	1:60	10.0

Sample	ATCC No.	Sample	Phenol	Coefficient
Sample 1	ATCC No. 6538	1:1130	1:90	12.6
Sample 2	ATCC No. 6539	1:885	1:80	11.1

FUNGICIDAL EFFICIENCY

PROCEDURE: The fungicidal activity of the sample was determined in conformance with the Fungicidal Test A.O.A.C., 11th Edition, Chapter 4, 4.018-4.022 adding the additional criterion of hard water by diluting the sample with A.O.A.C. synthetic hard water of 500 ppm hardness as calcium carbonate. The fungus employed was *Trichophyton interdigitale* ATCC 9533 (NIH 40).

used at the recommended use dilution of 1:128

CONCLUSION: Duplicate test results demonstrate complete kill at a use dilution of 1:154 providing a margin of safety when the product is

RESULTS

Sample Identification	Critical Killing Dilution Sample	Phenol
Sample 1	1:154	1:50
Sample 2	1:203	1:60

TUBERCULOCIDAL EFFICIENCY AT 1:128 (1 oz/gal)

PROCEDURE: The tuberculocidal activity was determined in conformance with the A.O.A.C., 11th Edition, Chapter 4, 4.048-4.050 adding the criterion of hard water by diluting the sample with A.O.A.C. synthetic hard water of 500 ppm hardness as calcium carbonate. The

test organism used was *Mycobacterium tuberculosis var bovis* (BCG).
CONCLUSION: Complete kill was obtained when the product is used at the recommended use dilution of 1:128

RESULTS: Sample Identification	Dilution	Carriers Exposed Carriers	Number of Carriers Showing Growth in Medium			Total Number of Positive Carriers*
			#1	#2	#3	
Sample 1	1:128	10	0	0	0	0
Phenol	1:50	10	0	0	0	0

Medium #1 Middlebrook 7H9 broth as specified in Section 4.048 of the Official Method of Analysis of the A.O.A.C.
Medium #2 Modified Proskauer Beck, reference as #1 above
Medium #3 Kirchner's Medium Difco, reference as #1 above
*Total number of carriers showing growth in one or more subculture media

VIRUCIDAL EFFICIENCY AT 1:128 (1 oz/gal)

PROCEDURE: Virucidal potency was determined by following the outline of the United States Food & Drug Administration for evaluation of bactericidal potency, except that the activity of Influenza Type A (Human Subtype A₂, Taiwan Strain) was determined in 9 day chick embryos and *Herpes Simplex* WI 38 was determined in Hep 2 (Epidermoid carcinoma, larynx, human). An additional criterion of

water hardness was added by diluting the sample with A.O.A.C. synthetic hard water of 500 ppm hardness as calcium carbonate.

CONCLUSION: Complete virucidal inactivation was obtained in duplicate tests when product was used at the recommended use dilution of 1:128 on both Influenza Type A and *Herpes Simplex* WI 38.

RESULTS						HERPES SIMPLEX WI 38					
INFLUENZA TYPE A, HUMAN SUBTYPE A ₂ , TAIWAN STRAIN, ASIAN FLU						TITRATION OF HERPES SIMPLEX VIRUS CULTURE					
TITRATION OF INFLUENZA TYPE A CULTURE			TITRATION OF UNTREATED CONTROL - CARRIER			Sample No. 1		Sample No. 2		Sample No. 2	
Sample No. 1	LD ₅₀ 10 ^{5.4} /ml *		Sample No. 2	LD ₅₀ 10 ^{2.6} /ml *		10 ^{6.3} TCID ₅₀ /ml *		10 ^{6.0} TCID ₅₀ /ml *		10 ^{6.0} TCID ₅₀ /ml *	
TITRATION OF UNTREATED CONTROL - CARRIER			TITRATION OF UNTREATED CONTROL - CARRIER			Sample No. 1		Sample No. 2		Sample No. 2	
Sample No. 1	LD ₅₀ 10 ^{2.7} /ml *		Sample No. 2	LD ₅₀ 10 ^{2.6} /ml *		10 ^{1.2} TCID ₅₀ /ml		10 ^{3.0} TCID ₅₀ /ml		10 ^{3.0} TCID ₅₀ /ml	
Sample Identification	Dilution	No. of Carriers Per Test	No. Embryos Inoculated Per Test	Deaths Within 24 Hours	Total Survival	Sample Identification	Dilution	No. of Carriers Per Test	No. Tissue Culture Flask Inoculated Per Test	Number Showing CPE**	
Sample #1	1:128	10	60	0	60	Sample #1	1:128	10	60	0	
Sample #2	1:128	10	60	1**	59	Sample #2	1:128	10	60	0	

* LD₅₀ is lethal dose to 50% of the egg embryos
** Considered to be non specific death due to trauma of inoculation
* TCID is Tissue Culture Infectious Dose
** CPE is Cytopathic Effect

USE ON ELECTRICALLY CONDUCTIVE FLOORS

PROCEDURE: The recommended use solution of 1:128 (1 oz/gal) was applied by multiple wet mopping technique without rinsing to conform with the requirements of the National Fire Protection Association, Bulletin No. 56. Following wet mopping applications the floor was allowed to air dry and electrical resistance readings were

taken.
CONCLUSION: Electrical resistance readings, taken following multiple wet mopping applications, were in the conformance "safe range" of 25,000 ohms to 1,000,000 ohms set by the National Fire Protection Association.

replace with
1:64

SKIN IRRITATION

PROCEDURE The primary skin irritative potential of a 1:64 aqueous dilution was evaluated in accordance with the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act. Interpretation 12 (Revised), *Federal Register*, Sept. 17, 1964, Section 162.116(a).

CONCLUSION Following patch application of a 1:64 aqueous dilution of the sample, the Primary Irritation Index was found to be 0. Concentrate produces severe skin irritation.

EYE IRRITATION

PROCEDURE The eye irritative potential of a 1:64 aqueous dilution of the test material was evaluated in accordance with the above cited section of law, Section 162.116(b).

CONCLUSION Eye application of 0.3 ml. of a (1:128) aqueous dilution of the sample produced no apparent toxic effects in any of the six test rabbits. Concentrate produces eye irritation.

ORAL TOXICITY

PROCEDURE The acute oral toxicity of this product at 2 times the concentrate strength shown on the label was determined in accordance with the above cited Regulations, Section 162.116(b).

CONCLUSION The acute oral LD₅₀ for male albino rats was found to be 2.71 ml/kg of body weight and 3.16 ml/kg of body weight for female albino rats.

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HOSPITAL USE AREAS AND SPECIFIC RECOMMENDATIONS

AUTOPSY ROOM - Mop floors and clean tables and equipment by sponge or spray with a solution of 1 oz. Cleaner-Disinfectant per gallon of water. For persistent odors apply solution of 1 oz. Cleaner-Disinfectant per gallon of water to problem area. To cold disinfect instruments, clean and immerse in solution of 1 oz. Cleaner-Disinfectant per gallon of water for 10 minutes.

EMERGENCY ROOM - Mop floors and clean and disinfect hard surface areas with a solution of 1 oz. of Cleaner-Disinfectant per gallon of water. Wipe continuous use equipment with a solution of 1 oz. Cleaner-Disinfectant per gallon of water.

CAFETERIA/DINING ROOM/COFFEE SHOP/KITCHEN - Mop floors with a solution of 1 oz. Cleaner-Disinfectant per gallon with special attention being given to heavy traffic areas. Wipe tables, chairs, counters and other working areas with a solution of 1 oz. Cleaner-Disinfectant per gallon. All food contact surfaces must be rinsed with potable water before reuse. Scrub garbage cans and other refuse containers to disinfect and remove offensive odors with a solution of 1 oz. Cleaner-Disinfectant per gallon of water.

FOGGING - Fogging as an adjunct to routine disinfection-for hard to reach areas as an adjunct preceding regular cleaning & disinfecting procedures, surfaces & objects can be treated by fogging unoccupied rooms with a dilution of 1:42 or 3 oz. Cleaner-Disinfectant in a gallon of water. For each sickroom approximately one gallon of fogging solution should be dispensed from a rotating fogger mounted on a 30 to 36 inch high table with the nozzle pointed upwards to a maximum angle after which the operator should allow a minimum of 2 hours after fogging has stopped before entering the room.

ISOLATION UNITS - Concurrent damp mopping of the floor area should be carried out with a solution of 1 oz. Cleaner-Disinfectant per gallon of water. In preparing a room for a new patient fogging is often times recommended as an adjunct to regular cleaning and disinfecting.

LABORATORIES - Scrub or wipe equipment and floors with a solution of 1 oz. Cleaner-Disinfectant per gallon. Immerse instruments, animal cages and other apparatus in a solution of 1 oz. of Cleaner-Disinfectant per gallon water for 10 minutes.

LAUNDRY CHUTE - Spray inside of chute twice each month by employing a garden type sprayer containing a solution of 1 oz. Cleaner-Disinfectant per gallon of water.

LAUNDRY - Presoak soiled linens to reduce incidence of contamination for a minimum of 10 minutes in a solution of 1 oz. Cleaner-Disinfectant per gallon of water.

Presoaking will serve as an adjunct to the regular laundering operation in reducing the micro-organism population.

MATERNITY, NURSERY AND PEDIATRIC WARDS - Mop floors, wash walls with solution of 1 oz. Cleaner-Disinfectant per gallon of water. Sponge or wipe surfaces of furniture or other working areas with solution of 1 oz. Cleaner-Disinfectant per gallon of water.

OBSTETRICS AND OPERATING ROOMS - Between operations apply approximately one quart of a solution prepared with 1 oz. of Cleaner-Disinfectant per gallon on the floor around the operating table. Using a clean laundered mop-head, or a rotary floor machine equipped with scrubbing brush or pad, vigorously clean this area moving gradually to the periphery of the room and adding solution as required. Excess solution should be removed from the floor by wet pick-up vacuum machine. Attention should be given to wiping exposed surfaces such as equipment and walls with a solution of 1 oz. Cleaner-Disinfectant per gallon. Once a week, the walls, ceiling and light fixtures should be sprayed with a solution of 1 oz. Cleaner-Disinfectant per gallon applied with a low pressure, garden type sprayer. A solution of 1 oz. Cleaner-Disinfectant per gallon of water should be used to saturate a layer of plastic sponge in a floor installed foot-type as a bacteriostatic treatment for shoes or shoe coverings and through which all carts would have to be rolled in entering the operating room. The solution in the foot-type bath should be changed daily.

OUT PATIENT DEPARTMENT - Mop floors with solution of 1 oz. Cleaner-Disinfectant per gallon of water and use a like solution to wash furnishings, walls, and equipment of this high traffic area.

PATIENT ROOMS - Mop floors and wipe exposed surfaces such as tables, furnishings and fixtures with a solution of 1 oz. Cleaner-Disinfectant per gallon of water. In preparing a room for a new patient, fogging is recommended as an adjunct to regular cleaning and disinfecting.

PUBLIC ROOMS AND CORRIDORS - Scrub floors by manual mopping or machine scrubber with solution of 1 oz. Cleaner-Disinfectant per gallon of water. Wipe exposed surfaces with solution of 1 oz. Cleaner-Disinfectant per gallon of water.

UTILITY AND WASHROOMS - Mop floors and wash walls and plumbing fixtures with solution of 1 oz. Cleaner-Disinfectant per gallon of water. To complete thorough deodorization the areas surrounding plumbing fixtures as well as toilets and urinals should be sprayed with a solution of 1 oz. Cleaner-Disinfectant per gallon of water and then allowed to dry.