Protocol Title

Neutralization Validation and Standard Guide for Assessment of Antimicrobial Activity Using a Time-Kill Procedure

Purpose

The purpose of this study was to determine the antimicrobial effectiveness of Chesson Labs Liquid Bandage against standard test organisms.

Study Design

Organisms per USP <51>
Neutralization Validation per USP <1227>
Time Kill Procedure per ASTM E2315

ORGANISM	COMMON	NEUTRALIZATION (% RECOVERY)	POPULATION COUNT	30 SECOND % REDUCTION	30 MINUTE % REDUCTION	CONTROLS
Staphylococcus aureus (MRSA)	Bacteria	>70%	$>10^8$	>99.99%	>99.99%	No Reduction
Escherichia coli	Bacteria	>70%	$>10^8$	>99.99%	>99.99%	No Reduction
Pseudomonas aeruginosa	Bacteria	>70%	$>10^8$	>99.99%	>99.99%	8.33% No Reduction
Candida albicans	Yeast	>70%	$>10^8$	>99.99%	>99.99%	No Reduction
Aspergillus brasiliensis	Mold	>70%	$>10^7$	>99.99%	>99.99%	No Reduction

Discussion

Because of the immiscibility of the product with water [which is required only to show potential recovery of the test organism in the controls], the polymer film was reconstituted in the organic solvents based on the percent solid ratio (15%). The tested product therefore incorporated the organic solvents with all the other chemical reagents of the final product, in the correct ratios, for microbial testing.

Conclusion

Results from an independent test lab indicate that the product has antimicrobial properties. The product consistently produced an average five-log kill of a $10^{7 \text{ to } 9}$ inoculum of all organisms identified in USP <51> [Staphylococcus aureus (MRSA), Escherichia coli, Pseudomonas aeruginosa, Candida albicans, and Aspergillus brasiliensis] within 30 seconds of contact.

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Chesson Laboratory Associates, Inc. is a privately held healthcare products company founded in 2006. Chesson Labs products are based on innovative patented and patent-pending polymer-based technology. The mission of Chesson Labs is to improve global healthcare by becoming a market leader in the development and delivery of innovative polymer-based medical products.