VIONEX ANTIMICROBIAL LIQUID SOAP

Technical Bulletin

Vionex Antimicrobial Liquid Soap is intended for handwashing between routine patient contact, procedures, after exposure to potential pathogens and after removal of personal protective equipment. It is formulated to be gentle and non-irritating for handwashing 30-50 times per day.

Vionex Antimicrobial Liquid Soap demonstrates bactericidal effectiveness against the following microorganisms:

Staphylococcus aureus
Methicillin Resistant Staphylococcus aureus (MRSA)
Escherichia coli
Bacillus subtilis
Pseudomonas aeruginosa
Aspergillus niger
Candida albicans
Streptococcus faecalis
Salmonella typhimurium

Bactericidal Studies

"Time Kill Study"

Carroll Company. July 10, 1997.

Conclusion: Vionex demonstrates cidal activity of 99.99% kill against *Staphylococcus aureus* and Methicillin Resistant *Staphylococcus aureus* (MRSA) in 60 seconds.

"Time Kill Study"

NIPA Hardwicke. June 24, 1997. Ref G.K. 7-18.

Conclusion: The study indicates the product effectively reduced Methicillin resistant *Staphylococcus aureus* in 30 seconds.

"Time Kill Study"

NIPA Hardwicke. April 24, 1996. Ref G.K. 6-107; G.K. 6-120.

Conclusion: The product effectively reduced *Pseudomonas aeruginosa, Salmonella typhimurium, Staphylococcus aureus, Escherichia coli* and *Candida albicans* in 30 seconds.

"Percent Bacterial Reduction"

Ferro Corporation, Bedford Chemical Division. July 27, 1990. TSR 90-139. Conclusion: The product demonstrated better than 99.88% population reduction of *Staphylococcus aureus*, *Streptococcus faecalis*, *Escherichia coli* and *Pseudomonas aeruginosa*.

"Zone of Inhibition Test"

Bedford Laboratory. April 29, 1987. TSR: 87-108.

Results:

	Zone	Zone
Methicillin resistant Staphylococcus aureus (MRSA)	7 mm	8 mm no growth

Conclusion: The product demonstrated a large zone of no growth with the test organism and may be considered to have good bacteriostatic activity against MRSA.

"Zone of Inhibition Test"

Bedford Laboratory. April 29, 1987. TSR: 87-108.

Results:

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	Zone No Growth (mm)	Zone No Growth (mm)		
Staphylococcus aureus	5	7		
Bacillus subtilis	3	4		
Escherichia coli	4	3		
Pseudomonas aeruginosa	2	2		
Aspergillus niger	7	8		
Candida albicans	35	35		

Conclusion: The greatest zone of inhibition demonstrated was 35 mm with the yeast *Candida albicans*. The fungi *Aspergillus niger* showed a 7-8 mm zone of inhibition. Among the bacteria, the Gram positive *Staphylococcus aureus* demonstrated the highest zone with a measurement of 5-7 mm. The Gram negative *Pseudomonas aeruginosa* showed the smallest zone of inhibition at 2 mm.

Toxicity Studies

"Primary Dermal Irritation Study"

Micro-Bio Testing and Research Laboratories. December 21, 1987. Accession No. 08-6303.

Conclusion: When tested on New Zealand white rabbits, the product was not found to be a primary irritant.