

## AdvaCyn® Wound Care

### Reduction of Microbial Load & Infection Prevention

IN-VITRO MICROBICIDAL PERFORMANCE STUDIES					
Category	Microorganism	Standard / method	Type	Exposure time [minutes]	Microbial load reduction
Bactericidal	<i>Pseudomonas aeruginosa</i>	AOAC Use Dilution	Carrier	10	> 4.7 log
		BS EN 13727:1999	Suspension	15	> 5.4 log
	<i>Staphylococcus aureus</i>	AOAC Use Dilution	Carrier	10	> 4.7 log
		BS EN 13727:1999	Suspension	15	> 5.1 log
	<i>Salmonella choleraesuis</i>	AOAC Use Dilution	Carrier	10	> 5.7 log
	<i>Enterococcus hirae</i>	BS EN 13727:1999	Suspension	15	> 5 log
Bactericidal (resistant strains)	Methiciline resistant <i>Staphylococcus aureus</i> (MRSA)	AOAC Use Dilution	Carrier	10	> 5.9 log
	Vancomycin resistant <i>Enterococcus faecalis</i> (VRE)	AOAC Use Dilution	Carrier	10	> 6.1 log
Tuberculocidal	<i>Mycobacterium bovis</i>	Tuberculocidal Suspension	Suspension	5	> 6.4 log
Virucidal	Human Immunodeficiency Virus type I (HIV-I)	acc. U.S. EPA guidelines	Carrier	10	> 3.7 log
Fungicidal	<i>Trichophyton mentagrophytes</i>	Fungicidal Use Dilution	Carrier	10	> 6.3 log
Sporicidal	<i>Bacillus atrophaeus</i>	BS EN 14347:2002	Suspension	15	> 6.5 log

### 30 seconds "in vitro kill time (%) reduction"

Tegen een breed spectrum van gram-positieve, gram-negatieve bacteria in een oplossing

• MRSA - <i>Staphylococcus aureus</i>	99.9999
• VRE - <i>Enterococcus faecalis</i>	99.9999
• <i>Staphylococcus aureus</i>	99.9999
• <i>Escherichia coli</i>	99.9997
• <i>Acinetobacter baumannii</i>	99.9999
• <i>Bacteroides fragilis</i>	99.9999
• <i>Candida albicans</i>	99.9999
• <i>Enterobacter aerogene</i>	99.9999
• <i>Enterococcus faecium</i>	99.9999
• <i>Haemophilus influenzae</i>	99.9993
• <i>Klebsiella oxytoca</i>	99.9999
• <i>Klebsiella pneumoniae</i>	99.9999
• <i>Micrococcus luteus</i>	99.9999
• <i>Proteus mirabilis</i>	99.9999
• <i>Pseudomonas aeruginosa</i>	99.9998
• <i>Serratia marcescens</i>	99.9999
• <i>Staphylococcus epidermidis</i>	99.9998
• <i>Staphylococcus haemolyticus</i>	99.9999
• <i>Staphylococcus saprophyticus</i>	99.9996
• <i>Staphylococcus hominis</i>	99.9999
• <i>Streptococcus pyogenes</i>	99.9999

Z.O.Z.



#### Voorbeelden van 99,9999 % bacteriereductie

E. coli ATCC 11229	1 min
M. tuberculosis bovis ATCC	5 min
P. aeruginosa ATCC 15442	10 min
Salmonella Choleraeuis ATCC 10708	10 min
S. aureus ATCC 6538	10 min
HIV SF33	10 min
Tricophyton Mentagrophytes	10 min
MRSA-VRE	10 min
Enterococcus hirae ATCC	15 min
Canine Parvovirus	15 min
Bacillus atrophaeus	15 min

## AdvaCyn Wound Care independent antimicrobial performance tests

(concentration = 100%)

<b>Virus</b>	<b>Study Type</b>	<b>Performance</b>
Human Hepatitis C (BVDV surrogate)	Clinical	> 99.99% reduction within 30 seconds
Human Immunodeficiency (HIV-1/Mn)	In-vitro	> 93.94% reduction within 30 seconds > 99.99% reduction within 2.5 minutes
Human Influenza A H1N1	In-vitro	> 99.99% reduction within 30 seconds
Avian Influenza H3N2 A	In-vitro	> 99.99% reduction within 30 seconds
Herpes Simplex type 1 (HSV-1)	In-vitro	> 68.74% reduction within 30 seconds
<b>Bacteria</b>	<b>Study Type</b>	<b>Performance</b>
Acinetobacter baumannii	In-vitro	> 99.99% reduction within 15 seconds
Bacteroides fragilis	In-vitro	> 99.99% reduction within 15 seconds
Clostridium difficile C-diff	In-vitro	> 99.99% reduction within 15 seconds
Enterobacter aerogenes	In-vitro	> 99.99% reduction within 15 seconds
Enterobacter aeruginosa	In-vitro	> 99.99% reduction within 15 seconds
Enterococcus faecalis	In-vitro	> 99.99% reduction within 15 seconds
Enterococcus faecium VRE, MDR	In-vitro	> 99.99% reduction within 15 seconds
Escherichia coli	In-vitro	> 99.99% reduction within 15 seconds
Haemophilus influenzae	In-vitro	> 99.99% reduction within 15 seconds
Klebsiela oxytoca	In-vitro	> 99.99% reduction within 15 seconds
Klebsiela pneumoniae	In-vitro	> 99.99% reduction within 15 seconds
Micrococcus luteus	In-vitro	> 99.99% reduction within 15 seconds
Neisseria gonorrhoeae	In-vitro	> 99.99% reduction within 15 seconds
Neisseria meningitidis	In-vitro	> 99.99% reduction within 15 seconds
Proteus mirabilis	In-vitro	> 99.99% reduction within 15 seconds
Pseudomonas aeruginosa	In-vitro	> 99.99% reduction within 15 seconds
Serratia marcescens	In-vitro	> 99.99% reduction within 15 seconds
Staphylococcus aureus MRSA	In-vitro	> 99.99% reduction within 15 seconds
Staphylococcus aureus VRSA	In-vitro	> 99.99% reduction within 15 seconds
Staphylococcus epidermidis	In-vitro	> 99.99% reduction within 15 seconds
Staphylococcus haemolyticus	In-vitro	> 99.99% reduction within 15 seconds
Staphylococcus hominis	In-vitro	> 99.99% reduction within 15 seconds
Staphylococcus saprophyticus	In-vitro	> 99.99% reduction within 15 seconds
Streptococcus pneumoniae	In-vitro	> 99.99% reduction within 15 seconds
Streptococcus pyogenes	In-vitro	> 99.99% reduction within 15 seconds
<b>Spores</b>	<b>Study Type</b>	<b>Performance</b>
Clostridium difficile	In-vitro	> 99.7% reduction within 30 seconds
Bacillus atrophaeus	In-vitro	> 99.99% reduction within 2 minutes
<b>Mycobacteria</b>	<b>Study Type</b>	<b>Performance</b>
Mycobacterium bovis	In-vitro	> 99.9% reduction within 60 seconds
<b>Fungus</b>	<b>Study Type</b>	<b>Performance</b>
Candida albicans	In-vitro	> 99.9% reduction within 15 seconds

Bron: *Oculus Innovative Sciences, USA. 2012*