

# In Vitro Studies



Challenge Microorganism (ATCC#)	Gram Stain	Initial Population (CFU/ml)	Exposure Time (sec)	Post-Exposure Population (CFU/ml)	Log <sub>10</sub> Reduction	Percent Reduction
<b>Nozin® Ethanol Studies *</b>						
<i>Staphylococcus aureus</i> MRSA (29213, 33592)	Pos	2.375 x 10 <sup>9</sup>	60	< 1.00 x 10 <sup>3</sup>	6.3757	99.9999
<i>Streptococcus pneumoniae</i> (33400)	Pos	9.050 x 10 <sup>8</sup>	60	< 1.00 x 10 <sup>3</sup>	4.9566	99.9989
<i>Streptococcus pyogenes</i> (12344)	Pos	3.250 x 10 <sup>9</sup>	60	< 1.00 x 10 <sup>3</sup>	6.5119	99.9999
<i>Mycobacterium smegmatis</i> (33592)	Pos	2.065 x 10 <sup>9</sup>	60	< 1.00 x 10 <sup>3</sup>	6.3149	99.9999
<i>Haemophilus influenzae</i> (9006)	Neg	2.440 x 10 <sup>9</sup>	60	< 1.00 x 10 <sup>3</sup>	5.3874	99.9996
<i>Candida auris</i> ** (B11903)	N/A	1.5 x 10 <sup>6</sup>	60	< 1.00 x 10 <sup>5</sup>	5.18	99.999
<b>Other Ethanol Studies***</b>						
<i>Enterococcus faecalis</i> (29212)	Pos	--	15	--	7.06**	99.9999
<i>Listeria monocytogenes</i> (7644)	Pos	--	15	--	6.34	99.9999
<i>Staphylococcus aureus incl. MRSA</i> (29213, 33591)	Pos	--	15	--	6.29	99.9999
<i>Staphylococcus epidermidis</i> (12228)	Pos	--	15	--	5.82	99.9999
<i>Streptococcus pneumoniae</i> (19606)	Pos	--	15	--	5.34	99.9994
<i>Acinetobacter baumannii</i> (19606)	Neg	--	15	--	6.60	99.9999
<i>Enterobacter aerogenes</i> (13048)	Neg	--	15	--	6.83	99.9999
<i>Klebsiella pneumoniae</i> (11296)	Neg	--	15	--	6.53	99.9999
<i>Pseudomonas aeruginosa</i> (15442, 27853)	Neg	--	15	--	6.56	99.9999
<i>Serratia marcescens</i> (14756)	Neg	--	15	--	6.87	99.9999
<i>Shigella sonnei</i> (11060)	Neg	--	15	--	6.28	99.9999

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\*BioScience Laboratories, Inc. (2005) using Nozin® Nasal Sanitizer® Antiseptic.\*\*Microbiology Consultants, Inc. (2019) using Nozin® Nasal Sanitizer® Antiseptic for Global Life Technologies Corp.\*\*Kampf G and Hollingsworth A. Annals of Clin Microbiology and Antimicrobials (2008);7(2) doi:10.1186/1476-0711-7-2). Nozin® Nasal Sanitizer® antiseptic is an OTC topical drug and no claim is made that it has an effect on any specific disease. Nozin® and Nasal Sanitizer® are trademarks of Global Life Technologies Corp. ©2017 Global Life Technologies Corp. All rights reserved.