BACTERIA …WHO THEY ARE AND WHAT THEY DO!

7 Common Bacteria that lab tests reveal a 99.99% reduction rate with Nixall® Wound+skin

Reduction in microbial growth in solution has not shown to correlate with a reduction of infection in patients. No clinical studies have been performed to evaluate reduction of infection in patients.

Acinetobacter baumannii

Acinetobacter baumannii is a typically short, almost round, rod-shaped Gram-negative bacterium. It can be an opportunistic pathogen in humans, affecting people with compromised immune systems, and is becoming increasingly important as a hospital-derived (nosocomial) infection.

Enterococcus faecalis

Enterococcus faecalis – formerly classified as part of the group D *Streptococcus* system – is a Gram-positive bacterium inhabiting the gastrointestinal tracts of humans and other mammals. Like other species in the genus *Enterococcus*, *E. faecalis* can cause life-threatening infections in humans, especially in the nosocomial (hospital) environment, where the naturally high levels of antibiotic resistance found in *E. faecalis* contribute to its pathogenicity.

Listeria monocytogenes

Listeria monocytogenes is the bacterium that causes the infection listeriosis. It is a facultative anaerobic bacterium, capable of surviving in the presence or absence of oxygen. It can grow and reproduce inside the host's cells and is one of the most virulent foodborne pathogens, with 20 to 30% of clinical infections resulting in death. Responsible for an estimated 1,600 illnesses and 260 deaths in the United States annually, listeriosis is the third-leading cause of death among foodborne bacterial pathogens, with fatality rates exceeding even *Salmonella* and *Clostridium botulinum*.

Propionibacterium acnes

Propionibacterium acnes is the relatively slow-growing, typically aerotolerant anaerobic, Gram-positive bacterium (rod) linked to the skin condition of acne; it can also cause chronic blepharitis and endophthalmitis, the latter particularly following intraocular surgery.

Proteus mirabilis

Proteus mirabilis is a bacteria with the ability to produce high levels of urease, which hydrolyzes urea to ammonia (NH_3), and makes the urine more alkaline. If left untreated, the increased alkalinity can lead to the formation of crystals of struvite, calcium carbonate, and/or apatite, which can result in kidney stones. The bacteria can be found throughout the stones, and these bacteria lurking in the kidney stones can reinitiate infection after antibiotic treatment. Once the stones develop, over time they may grow large enough to cause obstruction and renal failure. Proteus species can also cause wound infections, septicemia, and pneumonia, mostly in hospitalized patients.

Serratia marcescens

Serratia marcescens A human pathogen, S. marcescens is involved in hospital-acquired infections (HAIs), particularly catheter-associated bacteremia, urinary tract infections and wound infections. It is commonly found in the respiratory and urinary tracts of hospitalized adults and in the gastrointestinal system of children. Due to its abundant presence in the environment, and its preference for damp conditions, S. marcescens is commonly found growing in bathrooms especially on tile grout, shower corners, toilet water line, and basin.

Staphylococcus aureus (MRSA)

Staphylococcus aureus is a gram-positive coccal bacterium that is a member of the Firmicutes, and is frequently found in the respiratory tract and on the skin. It is a common cause of skin infections such as abscesses, respiratory infections, sinusitis, and food poisoning. The emergence of antibiotic-resistant forms of *S. aureus* such as MRSA is a worldwide problem in clinical medicine.

Study ID: GLP1085 | Client: Seriously Clean, Ltd. | Protocol Number: P1085

RESULTS

Test Substance Efficacy Results

These are the results of how the test product performed against each test microorganism, and the average CFU/ml that remained at each timepoint.

Microorganism	Timepoint	Average CFU/mL	Log Reduction	Percent Reduction
Acinetobacter baumannii ATCC 19606	Time Zero	1.35E+07	N/A	N/A
	15 Seconds	2.50E+02	4.73	99.998%
	60 Seconds	5.00E+01	5.43	> 99.999%
Enterococcus faecalis (VRE) ATCC 51299	Time Zero	1.45E+07	N/A	N/A
	15 Seconds	5.00E+01	5.46	> 99.999%
	60 Seconds	< 50	> 5.46	> 99.999%
Listeria monocytogenes ATCC 15313	Time Zero	1.09E+06	N/A	N/A
	15 Seconds	1.65E+03	2.82	99.848%
	60 Seconds	4.00E+02	3.43	99.963%
Propionibacterium acnes ATCC 6919	Time Zero	4.05E+06	N/A	N/A
	15 Seconds	1.25E+04	2.51	99.691%
	60 Seconds	3.00E+02	4.13	99.993%
Proteus mirabilis ATCC 7002	Time Zero	3.60E+07	N/A	N/A
	15 Seconds	< 50	> 5.86	> 99.999%
	60 Seconds	< 50	> 5.86	> 99.999%
Serratia marscesens ATCC 14756	Time Zero	2.72E+07	N/A	N/A
	15 Seconds	< 50	> 5.74	> 99.999%
	60 Seconds	< 50	> 5.74	> 99.999%
Staphylococcus aureus (MRSA) ATCC 33592	Time Zero	1.24E+07	N/A	N/A
	15 Seconds	< 50	> 5.39	> 99.999%
	60 Seconds	< 50	> 5.39	> 99.999%

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