

# NIXALL® WOUND + SKIN PASSES THE TEST AGAINST THESE 5 COMMON PATHOGENS

According to the USP 51 FDA required Test

## Aspergillus niger

*Aspergillus niger* is a fungus and one of the most common species of the genus *Aspergillus*. It causes a disease called black mold on certain fruits and vegetables such as grapes, onions, and peanuts, and is a common contaminant of food. Some strains of *A. niger* have been reported to produce potent mycotoxins called ochratoxins. *A. niger* is one of the most common causes of otomycosis (fungal ear infections), which can cause pain, temporary hearing loss, and, in severe cases, damage to the ear canal and tympanic membrane.

## Candida albicans

*Candida albicans* is a diploid fungus that grows both as yeast and filamentous cells and a causal agent of opportunistic oral and genital infections in humans. Systemic fungal infections (fungemias) including those by *C. albicans* have emerged as important causes of morbidity and mortality in immunocompromised patients (e.g., AIDS, cancer chemotherapy, organ or bone marrow transplantation). *C. albicans* biofilms may form on the surface of implantable medical devices. In addition, hospital-acquired infections by *C. albicans* have become a cause of major health concerns.

## Pseudomonas aeruginosa

*Pseudomonas aeruginosa* is a common bacterium that can cause disease in animals, including humans. It is found in soil, water, skin flora, and most man-made environments throughout the world. The symptoms of such infections are generalized inflammation and sepsis. If such colonization occurs in critical body organs, such as the lungs, the urinary tract, and kidneys, the results can be fatal. Because it thrives on most surfaces, this bacterium is also found on and in medical equipment, including catheters, causing cross-infections in hospitals and clinics. It is implicated in hot-tub rash. *P. aeruginosa* typically infects the pulmonary tract, urinary tract, burns, wounds, and also causes other blood infections. One in ten hospital-acquired infections is from *Pseudomonas*. The most common cause of burn infections is *P. aeruginosa*. One of the most worrisome characteristics of *P. aeruginosa* is its low antibiotic susceptibility. *P. aeruginosa* is naturally resistant to a large range of antibiotics and may demonstrate additional resistance after unsuccessful treatment. It is the most common cause of infections of burn injuries and of the external ear (otitis externa), and is the most frequent colonizer of medical devices (e.g., catheters).

## **Escherichia coli**

Most *E. coli* strains are harmless, but some stereotypes can cause serious food poisoning in humans, and are occasionally responsible for product recalls. Virulent strains of *E. coli* can cause gastroenteritis, urinary tract infections, and neonatal meningitis. In more rare cases, virulent strains are also responsible for hemolytic-uremic syndrome, peritonitis, mastitis, septicemia and Gram-negative pneumonia.

## **Staphylococcus aureus**

***Staphylococcus aureus*** meaning the "golden grape-cluster berry," and also known as "golden staph" and Oro staphira) is a facultative anaerobic Gram-positive coccal bacterium. It is frequently part of the skin flora found in the nose and on skin, and in this manner about 20% of the human population are long-term carriers of *S. aureus*. *S. aureus* is the most common species of staphylococci to cause *Staph* infections. *S. aureus* can cause a range of illnesses from minor skin infections, such as pimples, impetigo, boils (furuncles), cellulitis folliculitis, carbuncles, scalded skin syndrome, and abscesses, to life-threatening diseases such as pneumonia, meningitis, osteomyelitis, endocarditis, toxic shock syndrome (TSS), bacteremia, and sepsis. It is still one of the five most common causes of nosocomial infections, often causing postsurgical wound infections. It can survive on domesticated animals, such as dogs, cats, and horses, and can cause bumblefoot in chickens. It can survive for hours to weeks, or even months, on dry environmental surfaces, depending on strain. *S. aureus* infections may spread through contact with pus from an infected wound, skin-to-skin contact with an infected person by producing hyaluronidase that destroys tissues, and contact with objects such as towels, sheets, clothing, or athletic equipment used by an infected person.