CLINICAL STUDIES

Pennsylvania State University, ©1987
Silver-Coated Nylon Fiber as an Antibacterial Agent
Antimicrobial Agents and Chemotherapy
American Society of Microbiology
This published and peer reviewed study definitively proved the antibacterial properties of X-Static. This analysis also verified that an extract derived from the fiber was bactericidal. This attribute explains the disinfecting quality witnessed by the wearing of hosiery containing X-Static. Of particular interest, the efficacy of X-Static was demonstrated to be more bactericidal than silver nitrate.

Pennsylvania State University, ©1987
Effect of Silver Coated Thread on the Microbial Population of Shoes
“Interest in the project developed from our previous studies, from which we found that silver coated thread (X-Static) was remarkably inhibitory to the growth of and reproduction of several human pathogenic bacteria. Obviously, the presence of silver in the right shoe of the volunteers greatly diminished the total count of microorganisms and their associated odors.”

Pennsylvania State University, ©1987
Effect of Silver Coated Thread on the Microbial Population of Carpets
“Interest in the project developed from our previous studies, from which we found that silver-coated thread (X-Static) was remarkably inhibitory to the growth of and reproduction of several human pathogenic bacteria. In conclusion, the incorporation of silver-coated thread into carpet severely inhibits microbial growth and reproduction in carpets.”

Cornell University, ©1987
Newly Made Antibacterial Braided Sutures: In Vitro and In Vivo Biocompatibility Study
Journal of Biomedical Materials Research
This published and peer reviewed study demonstrates antibacterial properties toward new and established bacterial colonies. Additionally, the biocompatibility data suggested that the X-Static fiber implanted into gluteal muscle caused less of an inflammatory reaction than that of ordinary nylon. This study reaffirms the intrinsic safety of X-Static.

Cornell University, ©1987
In Vitro Quantitative Study of Newly Made Antibacterial Braided Nylon Sutures
Surgery, Gynecology & Obstetrics
This published and peer reviewed study is another example of the bacteriostatic qualities of X-Static. As could be expected, the performance of the fiber was excellent. Of particular note, this study demonstrates that silver ions will migrate into wound sites through electrophoretic activity.

United States Army Institute of Surgical Research, ©1995
Enhanced Survival of Autoepidermal-Allodermal Composite Grafts
The Journal of Trauma, Injury, Infection and Critical Care
“We have previously described antimicrobial effects and enhanced wound healing in experimental burns and grafts treated with silver/nylon dressings, either with or without
application of direct current. The results show as previously described for primary grafts, that silver/nylon with direct current shortens the time of reepithelization when compared to silver/nylon without DC or VG controls”.

United States Army Institute of Surgical Research, ©1995
Direct Current Reduces Wound Edema after Full Thickness Burn Injury in Rats
The Journal of Trauma, Injury, Infection and Critical Care
This study was conducted with the aforementioned study referencing the performance of silver/nylon bandages. In this study, silver nylon dressings were demonstrated to reduce edema (swelling and fluid accumulation) in full thickness burns.

New York University, September 7th, 1997
Independent Third Party Testing
Dr. Philip Tierno
This study utilized the traditional Kirby-Bauer method for determination of antimicrobial efficacy. The results confirm not only the excellent performance of X-Static as an antimicrobial agent but also show that the fabric tested was effective in killing MULTI-DRUG resistant bacteria. The testing confirms that X-Static is a viable and cost effective mechanism to address the growing problem of antibiotic resistant microbes.

NAMSA
Independent Third Party Testing
United States
NAMSA is one of the most well respected independent laboratories in the United States. It is both EPA and FDA certified. These numerous tests verify the exceptional performance of X-Static. Of note in these studies is that they indicate that X-Static is a broad-spectrum antibacterial agent. NAMSA testing also indicates the exceptional performance of X-Static as an anti-fungal; specifically against T. Mengatrophyles the fungus which causes Athlete’s Foot.

Tokai University, May 1997
Independent Third Party Testing
Dr. Seiki Tazume and Dr. Takahiko Yoshida
This study conducted in Japan demonstrated in a real world setting, consisting of 20 volunteers, that X-Static demonstrated an excellent reduction in bacterial and fungal counts. These results coincide with the rapid development of the Japanese hosiery market. X-Static is widely recognized in Japan as the most effective antimicrobial alternative. X-Static is approved by the Ministry of Health in Japan as an antimicrobial agent and exceeds the industry minimum standards of performance.

Additional Information:
• X-Static is an approved antimicrobial agent and registered with the EPA.
• X-Static is used in many FDA approved products, ranging from bandages to Class II medical devices used in corneal transplants.
• Noble Fiber Technologies is registered with the FDA as a medical device manufacturer.