



Silver in Technology

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Silver as an Anti-Bacterial

Silver's association with anti-bacterial properties has long been established. The ancient Phoenicians knew enough to keep water, wine and vinegar in silver vessels to ensure freshness. It is only recently, however, that scientists have discovered why silver works. Quite simply, silver interrupts the bacteria cell's ability to form the chemical bonds essential to its survival. These bonds produce the cell's physical structure so when bacteria meets silver it literally falls apart. For this reason, silver enforced bandages are especially in demand. Bandages with silver ions prevent bacterial growth and speed healing time, making them especially valuable for treating burn and wound victims.

Wound dressings containing silver have been an important aspect of healthcare for more than a century; soldiers in World War I relied heavily upon such dressings. Today, consumer healthcare companies like Johnson & Johnson and others offer their own lines of bandages and ointments that use silver as an active ingredient. Silver has actually been proven to promote the growth of new cells, thereby increasing the rate at which wounds can heal. And, unlike other metals with antimicrobial properties, it is not toxic to humans.

Another important use of silver as a biocide is in hospitals and other health care facilities. A life-threatening Staph germ called MRSA (Methicillin-resistant Staphylococcus aureus), often referred to as a "superbug," is resistant to almost all chemical antibiotics, so many hospitals are employing silver-embedded equipment including surgical tools, catheters, needles, stethoscopes, furniture, door handles and even paper files.

