# Silver Guard<sup>™</sup>



THIS INFORMATION IS FOR PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ONLY. THE INFORMATION IS INTENDED TO ASSIST PRACTITIONER DECISION MAKING AS TO WHETHER OR NOT THESE PRODUCTS FIT THE NEEDS OF THEIR PATIENT. THE SCIENTIFIC INFORMATION AND DIETARY SUPPLEMENT PRODUCTS PROVIDED BY ALIGHT HEALTH FORMULAS ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.

Silver Guard<sup>™</sup> provides an innovative, nanotechnology delivery system for pure silver that permanently suspends silver into the structure of water, so it will not fall out of solution. This patented process allows for penetration of silver at the cellular level by producing silver nanoparticles small enough to enter the red blood cells, enabling the silver to travel through capillaries for direct delivery to the cells, yet with a controlled effect due to the product's stability.

Silver Guard<sup>™</sup> is completely distinct from the outmoded colloidal silvers of the past, with many important chemical, physical and vibrational differences separating it far beyond other forms available. In fact, while no other liquid silver antimicrobial product had received a patent for over 80 years, a US patent was issued in 2006 for this innovative silver composition.

Supplement Facts Serving Size 5 mL (approx. 6 sprays) Servings Per Container about 24		
Amount Per Serving	% Daily	Value
Purified Silver	75 mcg	*
*Daily Value not established.		
ther Ingredients: Purified water		

Covered under one or more of the following patents; 6,214,299; 6,743,348; 7,135,195,

Unlike Silver Guard's<sup>™</sup> bioavailable silver, colloidal silver is simply a suspension of a silver molecule and an oxygen molecule combined together, creating a particle large enough to settle out of solution over time. This settling may occur in tissues as well, causing it to aggregate in such areas as the blood, fat, and brain. Whereas the silver in Silver Guard<sup>™</sup> is permanently in suspension, with the nanoparticles behaving as a single unit with respect to transport and reactivity for maximum effect and safety.

Silver Guard's<sup>™</sup> advanced silver allows for doses of only 5-30ppm without compromising effectiveness. Whereas colloidal silver suspensions require doses up to 300,000 ppm of silver. The so-called "blue man syndrome" where silver aggregates in the body, known as argyria, has only been seen in cases after extended high doses of colloidal silver.

Silver Guard's<sup>™</sup> superior form of pure silver may provide a range of immunoprotective benefits, from action against certain drug-resistant bacterial strains to inhibiting replication of some viruses, as well as stimulating stem cell production.

Silver Guard<sup>™</sup> is delivered in a spray pump to be used orally as a first line of defense against respirable pathogens and bacteria such as Group A Streptococci (GAS). The added support is especially beneficial for those who've experienced the immune altering impacts from respirable mycotoxins and endotoxins found in damp or water-damaged buildings.

#### **Recommended Use**

Take 5mL (approximately 6 sprays) per day, or as directed by a health care practitioner. Does not contain gluten, dairy, soy or GMOs. Intended for oral ingestion only. Not for topical use.

## Antibacterial Activity

Silver's use as an antimicrobial can be traced back thousands of years with applications still used today, such as food preservation and water sanitation. Many one-room school houses had a silver ladle in the communal water bucket to reduce disease transmission between the students. Silver water pitchers had a revered place in many homes, and the act of tossing a silver coin into a well may have had more to do with biochemistry than luck. Currently, silver nanoparticles are being utilized in numerous biomedical science and dentistry applications.

The antibacterial potency of silver nanoparticles are related to the physicochemical characteristics of the particles. The observed biophysical interactions occurring between Silver Guard's<sup>™</sup> nanoparticles and bacteria include cellular uptake and nanoparticle aggregation, which leads to membrane damage and toxicity to the foreign microbe.

A fundamental mechanistic difference in the type of silver used in Silver Guard<sup>™</sup> is what is known as catalytic action. The clever chemical composition forces the molecule to constantly try to balance itself out, resulting in a single, high-energy electron bouncing back and forth at high speed between two atoms. This catalyst, or catalytic action, effectively destroys pathogens while simultaneously recharging itself. This allows Silver Guard<sup>™</sup> to eradicate thousands of times more pathogens than the singular chemical action of colloidal or ionic silver, which only works by chemical action and requires direct contact with microbes.

The high energy that's constantly being created emits a resonant frequency that's been shown to be selectively destructive to pathogens. This energy has been measured at 890-910 terahertz, which is the same frequency at which germicidal ultraviolet light resonates. Due to their water-solubility, rather than lipid-solubility, silver nanoparticles have minimal oxidative effect on beneficial bacteria or healthy human cells.

The active ingredient in Silver Guard<sup>™</sup> has been shown in vitro to exhibit bacteriostatic and/or bactericidal activity against an extensive array of pathogenic bacteria, including Streptococcus pyogenes, Pseudomonas aeruginosa, Escherichia coli, Bacillus subtilis and Staphylococcus aureus including Methicillin-resistant Staphylococcus aureus (MRSA). Silver nanoparticles exhibited antimicrobial properties at less than 15 ppm.

Research suggests that silver nanoparticles promote bacterial apoptosis due to increased free radical formation, decreased energy production, and downregulation of antioxidant enzyme expression. Results from an infected animal model showed that the antimicrobial activity of silver nanoparticles is due to leakage of protein and sugars, increased generation of reactive oxygen species and malondialdehyde, as well as a significant decrease in ATP and lactate dehydrogenase levels in silver-treated bacterial cells compared to controls.

Non-toxic, even if used multiple times per day for weeks.

No known side effects or contraindications; safe for individuals at any age.

## Antifungal Activity

Due to proven antifungal activity in biomedical device applications and in vitro, silver nanoparticles have become one of the most promising options for the treatment of fungal infections. Drug resistance is a growing issue with pathogenic yeasts and molds. The difficulty with developing new antifungal drugs is mainly due to the fact that fungi have a cellular and molecular biology very similar to that of human cells, requiring selectivity of the therapeutic targets. Silver nanoparticles appear to meet this need.

Studies on various Candida species show that silver nanoparticles have similar or even better antifungal activity than certain clinically used antifungal agents. In vitro research reveals that silver is effective at inhibiting the growth of and killing Candida albicans at a dose of 10 ppm after only two hours of exposure, and is effective at inhibiting C. albicans biofilm formation. Silver nanoparticles impair yeast cellular targets which are vital for hyphal morphogenesis, the yeast to hypha transition being pivotal for virulence and biofilm formation.

Using Silver Guard<sup>™</sup> in the oral cavity may be recommended to help prevent fungal infections, such as thrush, and dental plaque.

## Antimicrobial Synergy

In the era of antibiotic resistance, novel antimicrobial approaches are needed, as bacteria continue to develop adaptive countermeasures against current antibiotics. Silver nanoparticles are being propelled forward as a promising adjunct due to their ability to work synergistically with conventional methods, showing additive effects.

Silver Guard<sup>™</sup> is not only safe to take with antibiotics, it can promote the effectiveness of a number of antibiotics. According to human hepatocyte modeling, the combinations demonstrated no to minimal toxicity against hepatocytes.

In chronic rhinosinusitis patients, commonly seen in patients exposed to mold-infested buildings, silver nanoparticles enhanced antimicrobial action of antibiotics against biofilm-mediated infections with MRSA and Pseudomonas aeruginosa. Additive effects against biofilms were seen for combinations of silver nanoparticles with tobramycin and ciprofloxacin against P. aeruginosa; with mupirocin against MRSA; and with augmentin, doxycycline, azithromycin and clindamycin against S. aureus. Additive effects against planktonic forms were observed for combinations of silver nanoparticles with tobramycin, ciprofloxacin, imipenem, ceftazidime and aztreonam against P. aeruginosa; with gentamicin or linezolid against MRSA; and with doxycycline or clindamycin against S. aureus. Similar synergistic effects are reported combining silver nanoparticles with kanamycin, colistin, rifampicin, and vancomycin against Klebsiella pneumoniae.

For more information about Alight Health Formulas<sup>™</sup>, email contact@alighthealthformulas.com.

## Safety

After using Silver Guard<sup>™</sup>, 99% of the silver leaves the body in 24 hours; all is cleared by 48 hours. This occurs because the silver in Silver Guard<sup>™</sup> has been structured into the water, allowing the water molecule to get absorbed into the blood stream and pass through circulation. It ultimately gets excreted unchanged, which means no harmful metabolites are formed.

Safety was further assessed in a prospective study with commercial 10-ppm and 32-ppm nanoscale silver particle solutions using 60 healthy subjects in a single-blind, controlled, cross-over, intent-to-treat, design. The study reported "no clinically important changes in metabolic, hematologic, or urinalysis measures were identified. No morphological changes were detected in the lungs, heart or abdominal organs. No significant changes were noted in pulmonary reactive oxygen species or pro-inflammatory cytokine generation. In vivo oral exposure to these commercial nanoscale silver particle solutions does not prompt clinically important changes in human metabolic, hematologic, urine, physical findings or imaging morphology."\*

## Therapeutic Differences by Composition



This product is manufactured using SilverSol Technology®, a specifically engineered silver solution with antimicrobial properties. The silver particles in Silver Guard<sup>™</sup> are small enough to be absorbed by red blood cells and resonate at the exact frequency shown to disrupt pathogens.

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Data on file. American Biotech Labs®. Resonant Frequency of SilverSol® Particles.

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