

Does Agion silver technology work as an antimicrobial?

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The antibacterial effectiveness of Agion silver zeolite technology was tested on door handles across the Penn State Erie campus and after four years of sampling, a significant difference was observed between the bacterial populations isolated from silver versus control-coated door handles. This research is presented at the annual meeting of the American Society for Microbiology.

"In our study we have analyzed the bacterial populations found on [silver](#)- and control-coated door handles within four different building on the Penn State Erie campus for four years both quantitatively by plating samples on various agar medias and qualitatively by sequencing and identifying bacteria,' said Beth Potter, Assistant Professor of Microbiology at Penn State Erie. Research done by Potter and her colleagues at Penn State found that initial characterization of the bacteria found on the silver- and control-coated [door handles](#) suggests that the technology may be more effective against [gram-negative bacteria](#) than [gram-positive bacteria](#).

While once limited to burn wound dressings and catheters to reduce clinical infections, silver has recently been incorporated into a wide variety of consumer products including, apparel, household appliances and even personal hygiene products. Silver's popularity as an antimicrobial stems from its effectiveness at very low concentrations, its ability to be incorporated into various materials and its effectiveness against a wide variety of microorganisms. In addition, silver has a multifactorial approach to killing microorganisms by targeting cell

membrane, enzymes, and DNA.

However, there is still a lot currently unknown regarding the standardization of minimum inhibitory concentrations, the development of resistance, and possible side effects to us and the environment stemming from the increased usage of silver. Therefore it is important to address whether the incorporation of silver into various products significantly alters the bacterial populations.

Provided by American Society for Microbiology

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