

**SILVER APPLICATION TECHNOLOGIES IN ANCIENT TIMES  
AND INNOVATIONS OF THESE TECHNOLOGIES  
IN OUR TIME FOR DISINFECTION OF WATER SYSTEMS**

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Ancient civilizations were confident in the therapeutic effect of silver products on the human body and actively used silver and solutions based on it for medical purposes. Silver has a long and interesting history as an antibacterial agent. This metal was used to purify water, care for wounds, to make bone prostheses, catheters and various surgical instruments. The antimicrobial effect of silver, or rather positively charged silver ions and its compounds, is manifested in the ability to interact with negatively charged cell receptors of bacteria and fungi, bacterial and fungal cells, destroying their structure and destroying.

All the healing effects of silver are born from its electrical conductivity and thermal conductivity. Due to these properties, positively charged silver ions create a conducting field that reflects electromagnetic radiation from the body and, as a result, improves blood flow and equalizes body temperature. Silver ions are used to disinfect drinking water, impose antibacterial dressings on wounds and burns.

There are various methods for producing nano-silver, many classification methods, such as classification by reaction conditions, reaction precursors and the production mechanism. Silver (nano-silver) is used in medicine to treat wounds, ulcers, to sterilize and increase the shelf life of drugs, in dentistry, as well as in biology. Compared to traditional silver-based antibacterial agents, nano-silver obtained with the help of nanotechnology not only has a more significant antibacterial effect, but also has higher safety and has a longer effect.

In recent years, studies of nano-silver have achieved extremely rich results in the field of preparation, properties and applications. Nano-silver materials are widely used in ceramics, the electronics industry and environmentally friendly materials and have wide application prospects in the field of antibacterial materials, catalysts and electrode materials.

**References:**

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