Sanosil®
Disinfectants for Life™
Silver Peroxide Disinfection Solutions
Introduction

Watertec has used Sanosil® disinfection technology for some time and has an exclusive distributor agreement with the UK importer to re-sell the product to the dental sector for use in dental chair waterlines (DUWL’s) to remove biofilm and protect against legionella and other human pathogens associated with dental water use.

Holding international patents, Sanosil® is manufactured in Switzerland and used worldwide as the professional disinfectant of choice in eliminating the risks posed to humans by protozoal, parasitic, viral, algal and bacterial pathogens including (amongst others) legionella, E.coli, pseudomonas aeruginosa and cryptosporidium.

Sanosil® is the only EU Biocide Article 95 compliant Hydrogen Peroxide/Silver based disinfectant. It is approved for use in the UK by the HSE and NHS and used widely by the international water management industry, specialist de-contamination professionals and by care homes, hotels, prison services, police forces, cruise ship operators, data centers and hospitals worldwide. The product is specified by the NHS to combat MRSA.

Based on the unique disinfection properties of silver stabilized hydrogen peroxide the chemical is intrinsically and environmentally safe to use in medical, clinical and most other built environments.

The “secret” of Sanosil® disinfectants is the combined 2-phase effect of the main ingredients hydrogen peroxide and silver. The oxygen split off from hydrogen peroxide attacks cell walls of microorganisms upon direct contact. The chemical reaction of oxygen with molecules in the cell wall denaturnizes and disrupts them. This effect is boosted by silver ions that bind to the exposed disulfide bonds of proteins associated with reproductive and metabolic systems and deactivates them resulting in rapid cellular degradation and microbial death.

In simple terms the hydrogen peroxide disrupts the cellular membrane of microorganisms. Silver attacks internal cell structure and processes. This combined effect boosts the biocide effect of hydrogen peroxide and silver exponentially. Whilst $\text{H}_2\text{O}_2$ breaks down into water and oxygen ($2\text{H}_2\text{O}_2 = 2\text{H}_2\text{O} + \text{O}_2$) minute traces of silver remain on the disinfected surface. These silver traces are invisible and non-toxic but actively and effectively counteract regermination and regrowth.

Most common disinfectants available on the market focus their biocide effect on one single point of attack. This may be sufficient to kill germs in the short term however, monovalent biocides inevitably result in the formation of resistant germ strains and become increasingly ineffective over time.

The use of polyvalent biocides such as Sanosil® is widely regarded as “smart” technology and less problematic as far as resistance is concerned.

To date and based on ongoing worldwide study, there is no human pathogen that has managed to develop a resistance to Sanosil®.

Use

Sanosil® has been available for some time in a range of formulations for professional use as a:
- surface cleaner
- low level water system continuous dosing agent
- water distribution system treatment for biofilm removal
- dental chair unit (DCU) waterline additive
More recently Sanosil® Aerosol Fogging Technology (initially developed for the US market) has become available to the UK professional hygiene sector and supplied by Watertec.

Fogging Technology

Sanosil® is produced in a range of formulations for use as a fogging agent and developed specifically for the Sanosil® Halo™ system.

The available formulations are:

- **Sanosil S003 (1.5% H₂O₂)** Fogging aerosol disinfectant for low level germ loads

- **Sanosil S006 (3% H₂O₂)** Fogging aerosol disinfectant for moderate level germ loads

- **Sanosil S010 (5% H₂O₂)** Fogging aerosol disinfectant for high level germ loads and particularly effective in combating:
  - Bacteria
  - Viruses
  - Yeasts
  - Mildew, fungi, molds & spores
  - Malodorous smell

The Sanosil® Halo™ is a fully automated device for the controlled and highly effective aerosol application of Sanosil® Fogging Aerosol Disinfectants.

Powered by the latest compressed air technology, the atomized aerosol particles have superb suspension characteristics and spread readily, consistently and completely into the treated space. Proven use in data centers confirms compatibility with live IT and other electrical devices.

After 20-30 minutes the generated aerosol slowly settles and microscopically wets all surfaces within the treated area. This film of Sanosil® having sanitized the room airspace can now get to work and eliminate viruses, bacteria molds and all other microbiological species from contact surfaces. It quickly evaporates without leaving a single trace of deposits.

The Sanosil® Halo™ is easy to handle and works fully automatically. All that needs to be done is to calculate and select the correct chemical formulation and target room volume and switch on the device.

Treated airspace is safe to re-enter after a 90 minute dwell time allowing hydrogen peroxide levels to stabilize to target levels prescribed by the World Health Organization “WHO”.

To ensure that even the most difficult to access areas are disinfected, the Halo™ technique is improved by Watertec to include the use of a hand held fogging solution to disinfect behind cabinetry, in ceiling and roof voids and in other difficult access situations including pipework and ductwork etc.

The handheld unit is also capable of dispersing post disinfection ambient air enhancing fragrance to complete the disinfection process.

MSDS, COSHH information and Method Statements are available on request including an extensive list of internationally recognised technical papers on the successful use of Sanosil® in a wide range of challenging applications.

Need to Know More?
Check out the Sanosil® Halo™ YouTube Video.