

VDA 6.2  
 ESAD II  
 G M P

DIN EN ISO  
 14001

DIN EN ISO  
 9001



SGS



**Today's  
 challenge for a  
 disinfectant is to be**

**Effective, Safe &  
 Ecological**

**without contaminating the  
 environment**



The registered chemical disinfectants are divided in several groups. The most common are the Aldehydes, the Alcohols, the Phenols, the Halogens and the Quats. The application fields for every single product are reduced to a limited number of situations. The Miller® concept for efficient disinfection envisions one single product for all applications.

Rein product GmbH has succeeded in developing a multi-component, ecological, i.e. fully degradable disinfectant that is highly effective against bacteria, fungi, algae, viruses and amoebae, without contaminating the environment: a remarkable advantage over traditional disinfectants.

**Miller concept**

**Hydrogen peroxide:**

An oxidizing agent which is stabilized with Silver ions for long term effect.

**Silver ions:**

Stabilizing the hydrogen peroxide effect, and also have an oligodynamic effect (covalent linkage with Microbial protein lead to protein precipitation & prevent DNA Duplication). Catalyst for Hydrogen peroxide in the ionic exchange during the process of organisms' protein oxidation.



*Miller*



## Advantages & Properties of the Miller Disinfectant

- Universal range of application.
- No gaps.
- Long-term effect.
- Hinders a renewed contamination.
- No danger of bacterial resistance.
- Effective at water temperatures of 0°C – 95°C.
- Effectiveness and long-term effect are guaranteed even at high water temperatures.
- No danger in case of overdosing.
- Does not create any odour.
- Has no toxic effect in its diluted state.
- No carcinogenic or mutagenic effect.
- In its diluted state it does not cause irritation to skin, eyes and mucous membranes.
- Does not alter the taste of foodstuffs treated.
- No need to rinse after application.
- Neutralization after use not necessary.
- Practically not detrimental to waste water and environment.
- Does not enter into chemical combination with any other chemical element.
- The pH value is not altered by the application in the recommended concentration.
- Storage of up to 5 years possible.
- Own measuring and regulating equipment.
- All raw material and equipment suppliers as well as the Miller® manufacturing plants satisfy the norms ISO 9001.
- VAH/DGHM Certificate.



## Miller Applications in Pharmaceutical Industries

• Treatment of service water	50 - 100 ppm
• Water treatment plant	200 - 300 ppm
• Production "Floor, Walls, Tools, Equipment"	3%
• Sterile area	3 - 6% (Fogging)

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## Effectiveness / Antimicrobial Effect

The antimicrobial effect of the Miller® Disinfectants includes the complete range of micro-organisms.

The effectiveness of the Miller® Disinfectants against numerous pathogens has been tested and confirmed in more than 250 assays carried out by well-known international institutions.

### Miller® Disinfectants are effective against:

- Gram positive and Gram negative bacteria
- Viruses, including bacteriophagus
- Spore-forming organisms
- Yeast
- Fungi
- Mould
- Protozoa

### Miller® Disinfectants are proven to be effective against:

Anthraxis, Amoebae, Cholera, ECBO, Herpes, Hepatitis, HIV, Influenza, Avian Flu, Legionella (Legionnaires Disease), Listeria, Meningitis, MRSA, Mycosterins, Newcastle Disease, Polio, Pseudorabies, Tuberculosis, Vaccina, VRE, etc.

### Miller® Disinfectants are effective against Biofilm:

Miller® Disinfectants are capable of destroying biofilm with the normal application concentration (i.e. without overdosing). This is an extremely important process everywhere where micro-organisms form so called biofilm as a protective coat. The oxygen released by the hydrogen peroxide oxidizes the biofilm thereby enabling the silver ions to eliminate the micro-organism unhindered.