For Avian Influenza

General Purpose Anti-viral Disinfectant
for the control of Bird Flu virus in the community.

Ecologically Friendly Antiviral Disinfectant.

Effective against Bird Flu.

Non Toxic & safe to use.

Safe around food.

Totally organic & biodegradable.

GeoSIL® represents the new generation of Eco-harmless biocides for the control of the full range of surface and water borne micro-
pathogens and viruses.

Manufactured under license to Sanosil Ltd., Switzerland, using a patented process, GeoSIL® uses the combined
effectiveness of hydrogen peroxide and silver to control pathogen bacteria, biofilms, yeast, fungus, mould etc. It
has been tested by well know international institutions and shown to be effective against over 200 common
pathogens. (See separate data sheet). It is approved by NZFSA for use in food processing areas, and is certified
as fully organic.

Recent test have shown that GeoSIL® is effective against Avian Influenza Virus H5N1

Test carried out in October 2005, at the Johan Béla National Centre for Epidemiology, Budapest, for Sanosil Ltd.
Switzerland, have shown that GeoSIL® is effective against Avian Influenza viruses H5N1, and sub types H5, H7,
and H9. In the in vitro test, with a concentration of 3% and 6%, and an exposure time of 20 minutes, the
disinfectant was shown to be very effective.

Influenza

Influenza is a respiratory infection that can be caused by a variety of flu viruses. It can be spread among people by
coughs, sneezes, or simply by touching surfaces contaminated with the virus, such as work surfaces, tools,
telephones, door handles etc. After touching contaminated surfaces, the viruses can pass from the hand to the
nose or mouth. Highly populated areas such as offices, crowded living areas, and schools are areas at greatest
risk. Viruses can also pass through the air and enter the nose or mouth.

Bird flu (H5N1) is a highly pathogenic strain of avian influenza and first appeared in Hong Kong in 1977. The name
H5N1 refers to the subtype of surface antigens present on the virus, (haemagglutinin type 5, and neuraminidase
type 1).

Avian influenza virus can be spread by birds through their saliva, nasal secretions, faeces or direct contact. Because the
virus is an influenza, in humans the symptoms can appear like a cold, or in more severe cases, pneumonia.
Effectiveness and Safety

The effectiveness of GeoSIL® comes from its ability to not only destroy the virus, but provide a degree of ongoing protection from the action of the silver. It is more powerful than hydrogen peroxide, chlorine, chlorine dioxide, or potassium permanganate. Because it is non toxic, tasteless, and odourless, it can be safely used to treat drinking water, or applied in public areas without risk to the occupants. These are unique features of GeoSIL® that distinguish it from many traditional disinfectants.

Areas of Application

In the control of Avian Influenza, GeoSIL® has many important uses;

- Disinfection of work areas, reception areas, medical treatment or quarantine areas, food preparation areas, schools, offices and the home.
- Disinfection of emergency water supplies, rainwater storage tanks, and to increase the storage life of emergency drinking water containers.
- Disinfection of bird cages, transport containers, poultry process areas.

Important Features

GeoSIL® anti viral disinfectant:

- Inhibits renewed contamination and is therefore ideally suited to water and surface disinfection.
- Has a long shelf life, and under the right conditions, water treated with GeoSIL® can be safely stored for up to 1 year.
- Does not alter the taste or smell of treated water. In most cases, any unpleasant tastes or odours will be removed by GeoSIL®.
- Does not cause any irritation of the eyes, skin, or respiratory system in application concentrations.
- Is neither toxic, carcinogenic, or mutagenic in application concentrations.
- Is environmentally friendly. The main components of GeoSIL® do not pollute the sewage system and decompose into water and oxygen without any polluting by-products.
- GeoSIL® can be used to sanitise infected building systems, or by automatic dosing, provide continuous protection against legionella or other bacterial infections in the building water supply.

Product Range

GeoSIL® - Universal Disinfectant

This is full strength GeoSIL® than can be diluted to any required concentration for immediate use, or directly dosed with dosing equipment. It has a long shelf life that allows storage for emergency planning, and is ideal for larger commercial applications.

GeoSIL150 is a lightly concentrated (15%) disinfectant that can be applied directly to water supplies or diluted as required. The reduced strength means that it is not a dangerous goods, can be safely stored and used without special training, and can be transported and handled with minimal safety concerns. It is a convenient product suitable for a wide range of uses and is additionally stabilised for long shelf life.

GeoSIL DS - Disinfectant Spray

This is a ready to use disinfectant for direct application with either hand or mechanical sprayers or fogging equipment. It is ideal as a general purpose anti-viral disinfectant for cleaning air handling equipment, filters etc. It is harmless to the environment, safe for the user, and is also additionally stabilised for maximum effectiveness and long shelf life.

Recommended Dosages*

<table>
<thead>
<tr>
<th>Application</th>
<th>GeoSIL®</th>
<th>GeoSIL150</th>
<th>GeoSIL DS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface disinfection</td>
<td>10 – 30 ml per litre (1 – 3%)</td>
<td>70 – 200 ml per litre</td>
<td>Ready to use or dilute up to 3:1</td>
</tr>
<tr>
<td>Water storage tanks</td>
<td>3 – 30 ml per 1000 litres (3–30 ppm)</td>
<td>20 – 200 ml per litre (3–30 ppm)</td>
<td>Use GeoSIL® or GeoSIL 150</td>
</tr>
<tr>
<td>Emergency Water Supply Containers</td>
<td>2 ml per 100 litres (20 ppm)</td>
<td>15 ml per 100 litres (≈ 20 ppm)</td>
<td>15 ml per 20 litres (≈ 20 ppm)</td>
</tr>
</tbody>
</table>

* ppm (mg/l) rates measured using GeoSIL Analytical Test Strips.

Recommended dosage is an average experimental value. Actual value should be adjusted depending on microbiological contamination of the water or surface, surface material, contact times, temperature etc. Values should be varied accordingly.