Super Oxidized Water, Hypochlorous Acid

ON Site Generating System

The best choice for infection Control

- Eco-Friendly & Greener Disinfectant
- Water Base Disinfectant
- Toxic-Free & Easy-Use
- Low-Cost and Less expenses to Sterilization
- Broad band Application
- Super Sterilization Efficacy
- One for ALL Sterilization and Infection Control
HOCL [Hypochlorous Acid] Generating System

The Medilox (generating system) produces Super Oxidized Water (Hypochlorous Acid) from brine solution (NaCL) and Tap-water by electrolysis Procedure.

This Water Base Disinfectant from the Medilox show great features;

- High Level Disinfectant - CE1023 MDD (93/42/EEC), USFDA, USEPA, KFDA
- Environmental Friendly - Greener Product
- Greener & Cleaner - Natural-return Features
- Ready to USE - NO hassle Dilution Procedure

What is Hypochlorous Acid (HOCL)?

The human body produces a highly effective antimicrobial solution called Hypochlorous acid to fight infection. White blood cells release this natural biocide to fight invading pathogens. The Hypochlorous acid produced by the human body’s natural immune system:

1. Interferes with microorganism’s metabolic processes
2. Kills individual bacterium exposed rapidly (1/1000 sec)
3. Reacts readily with a variety of microbial sub-cellular compounds

The Human Body’s Reaction against pathogens (Oxidative Burst Pathway)

![Diagram A: Needle, Invading Pathogens, Pathogen, Histamines, Blood Vessel]

A. When a wound breaks human skin, it creates a way for harmful pathogens to invade human cells.

![Diagram B: Wound Site, Move to infectious Site, Neutrophils]

B. Neutrophils, which are a type of white blood cell, live in human blood vessels. And Neutrophils reacts against invading pathogens, then move to the infection site to destroy the invading pathogen.

![Diagram C: Hypochlorous Acid's Phagocytosis, Destroys Pathogens]

C. The first step in this process is engulfing the pathogen. Accordingly destroys pathogens.
S.O.W ( Super Oxidized Water ) – HOCL

Super Oxidized Water is a sanitizer or disinfectant, which is safe, non-toxic, powerful, broad-spectrum biocide often referred to as Super-Oxidized Water, new generation concept disinfectant perfect to 21st C’s timely Green Global environment. It disinfects almost every microorganism such as Mycobacterium, MRSA, Pseudomonas, Salmonella, Shigella, Candida, Bacillus and Virus in a minute.

<table>
<thead>
<tr>
<th>Strong Acid Water</th>
<th>Hypochlorous Acid</th>
<th>Sodium Hypochlorite</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH : below 2.7</td>
<td>pH : 4.5 - 7</td>
<td>pH : above 8.5</td>
</tr>
</tbody>
</table>

Dangerous under High FAC due to Chlorine gasification

Sterilizing efficacy is strongest with more than 95% as HOCl

Sterilizing efficacy is weak because it is dissociated with above 90% of OCl

HOCl (Hypochlorous Acid)

Super-oxidized water

FAC : 50 ~ 80 ppm

PH : 4.5 ~ 7

ORP : 800 ~ 100mV

HOCl (Hypochlorous Acid) is about 80 times more effective in sterilization efficacy than Sodium Hypochlorite (OCl-) because negative charges on the microbial Cells repel the OCl-. Representative percentages of HOCl and OCl- are typically controlled by pH level as shown in the left graph.

Safety & Sterilization Effect & Fastest Sterilization

WaterLox solution is located in the area of safest with perfect sterilization. It is dream for everyone search for.
Sterilization Efficacy

Super Oxidized Water is the water generated by electrolysis procedure, which contains a little chlorine, catalyst using salt. Super Oxidized Water has super natures following, shows excellent sterilization effect by the action of the remains chlorine.

Disinfectant: Hypochlorous Acid (HOCL)
- FAC: 50 ppm
- PH: 5.2
- ORP: 950 mV

Tested by College of medicine, Seoul National University

0.1 ml mixture of microorganisms was added and mixed in to 10ml of waterlox. Control solution was used 10ml of normal saline instead of waterlox. After 30 seconds, 1minute, 3minute, 5 minute, 0.2ml of mixed microorganisms and waterlox was blended into 10ml of Brain-Heart Infusio broth. 0.1ml of this mixed solution was inoculated on Sabouraud dextrose agar and incubated for 48 hours at 30℃.

<table>
<thead>
<tr>
<th>Test organism</th>
<th>Survivor count per ml</th>
<th>Test organism</th>
<th>Survivor count per ml</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st count</td>
<td>30 s</td>
<td>1m</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>3.2 * 10^6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Salmonella sp.</td>
<td>2.1 * 10^6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Candida albican</td>
<td>8.2 * 10^5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Shigella boydii</td>
<td>6.4 * 10^5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>MRSA SNUH 7135</td>
<td>6.3 * 10^6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hepa B virus</td>
<td>1.0 * 10^5</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

2009, Seoul National University

Anti-Bacteria Spectrum

S.O.W from the DEVICE has broad band Anti-bacterial spectrum. S.O.W works as more as glutaraldehyde, Ever-strongest toxic disinfectant does in disinfection. However it is the disinfectant as safe as water to kill the bacteria, Bacillus subtilis, which is the very strongest bacteria ever known.
ON-Site **Hypochlorous Acid** Generating System

◆ **Easy Maintenance**

Medilox (Super Oxidized Water, Hypochlorous Acid) Generating System has been designed for easy maintenance and Maximum Uptime enhanced features like;

★ Easy Installation  
★ Easy Reagent Fill-up  
★ Easy Parts Change – Module Replacement  
★ Less Wire

◆ **User friendly Operation**

SOW Machine has User Friendly interface for easy operation. All status can be displayed from the Integrated front Panel and has alarm when problems.

◆ **Compact Size**

Space- Saving Size machines can be placed in very small Preparation room, even niche. Small Device works like a Plant.

◆ **Integrated Automatic Generation Process**

SOW Machine is designed to control each process integratedly like Raw Material Empty, Refill, SOW Generation, Distribution, in order to be maintained Correctively, efficiently.

◆ **Cost effective**

ON-Site SOW Generating Machine helps to minimize costs efficiently for Hospital in terms of disinfectant purchase management. Investment will return in just few months.
Super Oxidized Water & Medilox application in Hospital & Medical

- Disinfecting endoscope.
- Disinfecting Hands.
- Disinfecting instruments (especially operation instrument).
- Disinfecting wound after operation (against MRSA).
- Washing wound and a burn (against MRSA).
- Gargling water in Dental.
- Used as tank water of a suction machine (disinfection and deodorization).
- Washing and disinfecting incubator.
- Washing and Disinfecting Operation room.
- Biofilm Removal in Dental Chair
- Cleaning and Disinfecting floor, wall and ceiling, toilet, bathroom, dining-room, preparation room and handrail, doorknob and others in Building or Hospital....

Super Oxidized Water & Generator’s application in Food Safety

- Washing and sanitizing Produce, Vegetables, Meat...
- Washing and cleaning equipments in Food Production Facilities.
- Washing and Cleaning instruments in Preparation Room
- Cleaning and Disinfecting table, Counter tops, dishcloth Restaurants
- More...
### Specification MS4000P

<table>
<thead>
<tr>
<th>Specification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Production Method</strong></td>
<td>Electrolysis Base (Electrochemical Activation)</td>
</tr>
<tr>
<td><strong>PH Range</strong></td>
<td>4.5 ~ 7.0</td>
</tr>
<tr>
<td><strong>FAC</strong></td>
<td>30 ppm [Min.]</td>
</tr>
<tr>
<td><strong>ORP</strong></td>
<td>750mV [Min.]</td>
</tr>
<tr>
<td><strong>Production Capacity</strong></td>
<td>240 Lt ~ 600 Lt : 63.4 Gl ~ 158.5 Gl / Hr</td>
</tr>
<tr>
<td><strong>Power Source</strong></td>
<td>100 ~ 240 VAC, 50/60 Hz, 100 watt</td>
</tr>
<tr>
<td><strong>Water Pressure</strong></td>
<td>Above 1.8 kg/m²</td>
</tr>
<tr>
<td><strong>Required Feed Water TDS</strong></td>
<td>less than 80 ppm</td>
</tr>
<tr>
<td><strong>Agent Chamber</strong></td>
<td>4 L / built-in</td>
</tr>
<tr>
<td><strong>Feed Water Regulator</strong></td>
<td>Feed Water TDS and Volume Control</td>
</tr>
<tr>
<td><strong>Storage Tank (Optional)</strong></td>
<td>20L, 60L</td>
</tr>
<tr>
<td><strong>Net Size / Weight</strong></td>
<td>35(cm)*30(cm)*57(cm) - 30kgs : 13.7(in)*11.8(in)*22.4(in) - 66.13 lbs</td>
</tr>
</tbody>
</table>

No matter where you are!
No matter what your business is linked with!

Water is a Key Source.
KTCC has the Key
KTCC wants to share the Key with You.