AQUAOX™

The Aquaox Advantage

Background

There is an epidemic of health care acquired infections within hospitals, out-patient surgical centers, nursing homes and other medical facilities. A major cause of this epidemic is environmental surface contamination. It is estimated that 40% of healthcare acquired infections are attributed to cross contamination from hands of patients, healthcare workers and visitors onto environmental surfaces.

Superbugs

Highly resistant pathogens can live on surfaces for days if not months. For example, the vegetative cells of clostridium difficile can survive 24 hours and its spores can survive 5 months. Acinetobactor baumannii can survive up to 9 days on a patient's bed railing.

Environmental Services Staff Dilemma

The burden of eliminating surface contamination falls on the environmental services staff. They have an extremely important role in eliminating healthcare acquired infections. However, environmental services often do not have the tools to successfully minimize surface contamination and healthcare acquired infections.

Time is Money

Environmental services are limited by patient sensitivity to harsh or toxic chemicals. However, the biggest obstacle for Environmental Services is TIME. The average time for an environmental service Technician to do a patient terminal cleaning in a US hospital is 27 minutes. This is an almost impossible task considering the amount of work and limited tools.

Aquaox Advantage

Three Anti-Microbial Solutions in One

Aquaox Electrolyzed Oxidizing Water generator generates onsite three anti-microbial solutions by electrolyzing a dilute brine solution.

Electro-Chemistry

As voltage is applied to the electrolysis cells, salt become disassociated and the separated sodium ions migrate to the cathode and the chloride ions move to the anode. Within the electrolysis cell, water becomes disassociated. Water is broken into hydrogen ions and hydroxyl ions. At the cathode, sodium ions bond with hydroxyl ions forming an alkaline cleaning compound consisting of sodium hydroxide with superior surfactant properties. At the anode, chloride ions bond with hydrogen ions and ions of oxygen to forming hypochlorous acid.

One of the solutions is used to dissolve protein, emulsify oils and fats making it an effective general purpose cleaner.

The cleaning solution contains 150 to 200 ppm Sodium hydroxide (NAOH); it has a pH of 10 to 13 and an Oxidation-Reduction Potential of -800 to -1000mV.

The cleaning solution has a yellow color to distinguish it from the sanitizing solution and disinfectant solution.

Another solution is used as a non-corrosive, fast active general purpose sanitizer.

The sanitizing solution has a pH of about 6 to 7 and an Oxidation-Reduction Potential of +800 to +1000mV. It consist 250ppm (+/- 10%) Free Available Chlorine.

A third solution is used as a high level disinfectant, capable of killing all microorganism, including MRSA (methicillin resistant staphylococcus aureaus), C. diff (clostridium difficile), VRE (vancomycin resistant enterococci) and acinetobactor baumannii.

The disinfectant has a pH of about 6 to 7 and an Oxidation-Reduction Potential of +800 to +1000mV. It consist 460ppm (+/- 10%) Free Available Chlorine.

All anti-microbial solutions are freshly generated and dispensed on demand from color marked faucets.

AQUAOX 112:

Streakless cleaning agent with yellow color.

- No surfactants or suds added.
- Equivalent efficacy to a 2% NAOH-solution, although only 150-200 ppm
- Odorless
- Effective against gram negative bacteria.

AQUAOX 250:

General surface sanitizer with citric/orange odor.

- Log 4 reduction in less than 15 seconds
- EO Acidic Water at 250 ppm hypochlorous acid kills CRE's on contact.

AQUAOX 460:

High-level disinfectant

- Log 6 reduction in less than 15 seconds.
- Effective against MRSA (methicillin resistant staphylococcus aureaus), C. diff (clostridium difficile), VRE (vancomycin resistant enterococci) and acinetobactor baumannii.
- not only a bactericide, but also a fungicide, sporicide and virucide.
- Fast-Acting
- Cold
- Residue Free
- Non toxic disnfectants
- Micro-organism cannot develop resistancy against hocl (hypochlorous acid), unlike the case with chemicals (e.G. Occurance of super bug)

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