What is Electrolyzed Water?

Electrolyzed water (EOW) or HOCl (hypochlorous acid) is an all-natural, no-rinse, non-toxic, non-irritant, and environmentally safe antimicrobial solution that is the product of an electro-chemical reaction of water, salt, and electricity. It serves as a potent antimicrobial agent, approximately 100 times as effective as chlorine bleach.

Electrolyzed (EOW) water is generated by the electrolysis of a dilute NaCl solution interacting with an electrolytic cell. This process creates an anolyte solution predominantly of hypochlorous acid (HOCl). EOW is highly biocidal and can kill common food-born pathogens such as Salmonella, E. coli, Listeria, and Campylobacter in less than 30 seconds on contact. It has been proven to be effective against bacterial spores and viruses that can be highly resistant to other disinfectants. EOW is also capable of dislodging and removing biofilm which can be a major contributor to contamination in pipes and clean-in-place (CIP) systems of beverage and dairy manufacturing.

Unlike other oxidants, such as ozone (O3) and chlorine dioxide (ClO2), which are gases and rapidly leave solution in seconds to minutes, HOCl is stable in solution and maintains biocidal concentrations for up to several months. Stability in solution allows for HOCl to be used in many applications in the food industry from the farmer to the table, not only for direct food contact, but also for the disinfection of food contact surfaces. HOCl has been proven to be stable in solution for several months when stored in closed containers protected from oxygen and light and to be stable for several hours when in buckets or sinks that are exposed to the oxygen in the air.

When HOCl is applied on food or contact surfaces, it behaves as an oxidizing agent. When reduced by organic matter, it leaves no harmful residues and therefore no potable water post-rinse is required. The aforementioned features make electrolyzed water (hypochlorous acid) a superior operational solution for any food-service provider, saving time and resources and enabling frequent, real-time application.

There are a broad range of applications for the use of this technology in industries such as agriculture, food and beverage, hospitality, healthcare, and water treatment. EOW can be safely and efficiently utilized through a variety of methods such as direct application, pressure spraying, dosing, and fogging