



This *Engineered Water Fact Sheet* is a guide to better understanding *Engineered Water* from an infection prevention perspective.

The *Engineered Water Consortium (EWC)* defines Engineered Water (EW) as: “Water engineered to meet the performance requirements of professional cleaning, sanitizing and/or disinfecting, with long-term-value and green factors as key uptake and ethical drivers, and On Site Generation (OSG) as a common denominator.”

EW includes, but is not limited to:

- Electrolysis of Water
- Aqueous Ozone

Engineered Water production technologies are effective in the following ways or configurations:

- **Electrolyzed Water** – Effectiveness of systems using non-augmented water supplies (e.g., ordinary tap water without mineral or electrolyte additives) varies depending on the system and water source, while electrolysis of augmented water, in which an electrolyte (either generic sodium chloride [NaCl, aka, a pure form of table salt] or a proprietary ‘mineral’ blend) is added to tap water before treatment by electrolysis, creates substances including hypochlorous acid and other oxidizing agents that may perform effectively in a pH-neutral to slightly acidic solution to sanitize and, depending on the configuration, disinfect hard surfaces.
- **Aqueous Ozone** – ozone electrically infused into water may provide an effective sanitizer through oxidation at near-neutral pH.

EPA Regulation

- EPA’s authority under FIFRA does not authorize it to “Register” pesticidal devices as it does chemical disinfectants, although it regulates the manufacture and sale of such devices by issuing an EPA Establishment Number to makers of devices, requiring manufacturers to be prepared to scientifically demonstrate or validate germ-kill or inactivation claims, although actual enforcement is limited.
- EPA does require “Registration” of solutions produced by electrolysis of augmented water, when augmentation involves the use of a proprietary electrolyte formulation as opposed to generic water augmentation using a commonly available electrolyte such as sodium chloride, or NaCl, aka, a pure form of table salt.

Recommendations

The Healthy Facilities Institute (HFI), Cleaning Performance Center (CPC), and EWC recommend prospective purchasers of EW systems request test data from suppliers and confer with knowledgeable independent persons (e.g., 3rd party labs, microbiologists, etc.) regarding the meaning and value of test reports before investing in systems.

HFI, CPC, and EWC recommend asking for EPA Registration information from makers of systems producing EW using proprietary electrolyte formulations added to water prior to electrolysis.

Electrolyzed Water and Aqueous Ozone can be effective interventions for infection prevention when used according to manufacturer directions as part of a systematic approach to facility cleaning and hygiene.

(Sources: Benjamin Tanner, PhD, president of Antimicrobial Test Laboratories – a leading independent firm testing the antimicrobial performance of EW systems, & US EPA.)

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