Introduction:

According the US EPA Office of Water, ozone is one of the most potent and effective germicides used in water treatment and is effective against bacteria, viruses, and protozoan cysts (US EPA, 1999). FDA Generally regarded as safe (GRAS) approval for ozone disinfection of bottled water. renewed. In 1987, 600 MGD (million gallons per day) ozonation plant comes on line in Los Angeles for municipal water sanitation after seven years of pilot testing.
In response to a Food Additive Petition submitted during August 2000, the U.S. Food and Drug Administration formally approved the use of ozone as an Antimicrobial Agent for the Treatment, Storage and Processing of Foods in Gas and Aqueous Phases. Next came approval by the US FDA as an antimicrobial additive for direct contact with foods of all types (FDA 2001). The approval was published on June 26, 2001 (FDA, 2001).
As recently as 2014, the FDA cleared medical devices, which included ozonated water as a final stage disinfectant for semi-critical devices such as endoscopes, dialysis equipment and other temperature sensitive equipment.

Testing on the Bacterial Reducing Faucet

Antimicrobial Performance of Ozone System

Mechanical and Electronic Engineering

School of Engineering, Physics and Mathematics

University of Dundee

In this study, the antimicrobial assays of ozonated water collected from the ozone device (Aqualogic NT Limited) were performed at the Biological and Nanomaterials Lab, University of Dundee. The antimicrobial effects of ozonated water were evaluated against both gram-positive bacteria (Staphylococcus aureus (F1557)) and gram-negative bacteria (Escherichia coli WT (F1693), Pseudomonas aeruginosa (ATCC 33347)),

Conclusion

Aqualogic NT Ltd' ozonated water can inactivate bacteria on solid surfaces by over 99.8% within 1 min.

About SGS:

SGS is the world's leading inspection, verification, testing and certification company. We are recognized as the global benchmark for quality and integrity. With more than 90,000

employees, we operate a network of more than 2,000 offices and laboratories around the world. http://www.sgs.com/en/our-company/about-sgs/sgs-in-brief

SGS Tested the following Microbials;

Coliform

Esherichia coli

Staphylococcus aureus
Pseudomonas Aeruginosa

Candida albicans

Legionella pneumophila

1. The test solution was prepared in SGS laboratory.
2. Using tap-water processing through the product continually for 30 seconds then collecting 2000mL water.
3. Put 0.4mL test solution into 2000mL water(after Step 2) and well mixed.

Pathogens were reduced to 99.9 after exposure from ozonated water from the Anti-Bacterial faucet tested.

Ozone is not only killing bacteria but also capable to destroy chemical from of pesticide. Please find attached our test report for pesticide removal. The SGS equipment can detect 214 types of pesticides. See page 3 to 5. As long as type of residual pesticide on vegetables or fruits are within the list, the equipment can detect it out. Outside of the list, it's not detectable

Ozone Water Effect on Leaf and Root Development

Scientia Horticulturae

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The purpose of this study was to determine if aqueous ozone impacts tomato (*Lycopersicon esculentum* Mill. cv Matrix F1) productivity when applied directly

to a mineral wool growth substrate via drip irrigation. At the highest aqueous ozone treatment level (3.0 mg L^{-1}) significant increases in leaf area, shoot dry matter, and stem thickness were observed. There were no differences across all treatments in terms of net CO_2 assimilation rate, stomatal conductance, internal leaf CO_2 concentration, chlorophyll content index, and fruit production. A qualitative assessment of algae growth on the substrate surface was conducted. Both ozone treatments resulted in a visually discernible reduction in algae prevalence on the substrate surface. The results of this study do not support the removal of aqueous ozone (at the concentrations examined) prior to distribution when the solution is applied via drip irrigation in mineral wool hydroponic tomato production.