# ΛQUΛΡΡRΟΛCΗ TREATMENT SYSTEMS

Driven by exceptional customer service, we strive to deliver on our promise of water treatment you can trust. At Aquapproach, your performance is our priority.

# Chlorine Dioxide (ClO<sub>2</sub>) - The Proven Choice against Bacteria

DID YOU KNOW...Salmonella and other bacteria often form in water throughout the poultry growing and processing phases? This can put the health of the bird, and ultimately, consumer at *risk.* Chlorine Dioxide is proven to virtually eliminate bacterial growth by using a fraction of the chlorine volume required, saving water and increasing efficiency.

## Our innovative approach keeps health and safety at the forefront

Our DOD System generates chlorine dioxide on demand delivering day and night sanitation quietly in the background while you focus on your day-today operations. With this system, you'll reduce chemical consumption, lower inventory management, and expect consistent results.

NOT AFFECTED BY PH

Why ClO, is the Right Choice for Reducing Salmonella Chlorine dioxide has many unique properties that make it a superior choice for water treatment, water line cleaning, surface sanitation, and general disinfection.







REMAINS A TRUE



SELECTIVE OXIDIZING CHARACTERISTICS PROPERTIES

LONG LASTING RESIDUAL

GAS IN SOLUTION

EXCELLENT DISINFECTANT



TEN TIMES MORE SOLUBLE THAN CHLORINE



EFFECTIVELY CONTROLS BIOFILM, ALGAE, IRON, MANGANESE, HYDROGEN SULFIDE, ODOR AND TASTE ISSUES

Chlorine dioxide combines a high oxidation capacity with a low oxidation strength which means that it requires less chemical to achieve a specific goal and does it at a lower corrosion rate than chlorine bleach or hydrogen peroxide.

ClO<sub>2</sub> can be used as an antimicrobial agent in water from the growout through the plant!

CIO<sub>2</sub> is not pH dependent whereas chlorine often requires pH below 6 to be most effective.

### CIO<sub>2</sub> Studies on Effectiveness of Salmonella Reduction

The data below shows that Chlorine Dioxide, when used at 1.4 PPM or higher, nearly eradicates all traces of salmonella.

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Water samples tested negative for salmonella above 1.33 mg/l ClO<sub>2</sub> residual. Only 1 in 96 carcasses had traces of salmonella in water using .4-.6 mg/l of Chlorine Dioxide. **No** salmonella positive carcasses were detected when ClO<sub>2</sub> was increased to 1.33 mg/l or higher.

"The savings in cost of water and discharge would probably exceed the cost of chlorine dioxide in plants." ~H.S. Lillard, Bactericidal Effect: Chlorine vs. Chlorine Dioxide

#### REFERENCES

The Efficacy of Chlorine Dioxide in Controlling Salmonella Contamination and Its Effect of Product Quality of Chicken Broiler Carcasses. G.P. Thiessen, W.R. Usborne, and H. L. Orr. Department of Animal and Poultry Science and Food Science, University of Guelph. 1983.

Levels of Chlorine and Chlorine Dioxide of Equivalent Bactericidal Effect in Poultry Processing Water. H.S. Lillard.

The Incidence of Salmonella on Poultry Carcasses Following the Use of Slow Release Chlorine Dioxide. Mario E. Villerreal, Robert C. Baker, and Joe M. Regenstein. Department of Poultry and Avian Sciences, Institute of Food Sciences, Rice Hall, Cornell University. 1989.

### We can help create a healthy solution for you.

We share the same goal of keeping consumers safe from salmonella or other bacterial illnesses and reducing our environmental footprint during the processing phase. Having a reliable water treatment system and a great team that supports you along the way will allow you to focus on what's important. Call us for an assessment and we'll outline a plan that works best for you.

#### YOU CAN REACH US AT:





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