



# INCREASE PRODUCTION & REDUCE COSTS AT YOUR POULTRY FACILITY

## POULTRY FARM APPLICATIONS:

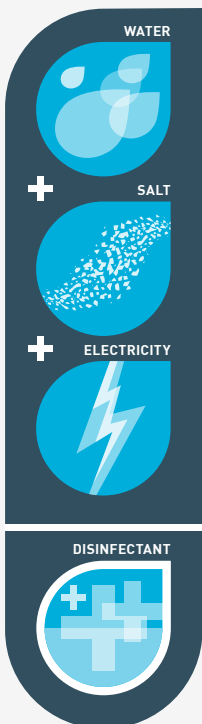
- DRINKING WATER DISINFECTION & SANITATION
- COOLING PAD WATER TREATMENT
- WATER LINE & NIPPLE LINE CLEANING
- BIOFILM REMOVAL
- POULTRY HOUSE & EQUIPMENT DISINFECTION
- FOOTBATH & SURFACE SANITATION



## What is Mixed Oxidant Solution?

MIOX Mixed Oxidant Solution (MOS) is an extremely powerful yet non-hazardous disinfectant that replaces conventional treatment chemicals. Generated on-site using a patented electrolytic process, MOS removes biofilm, decreases microbial load, improves water quality for animal health, and lowers corrosion rates.

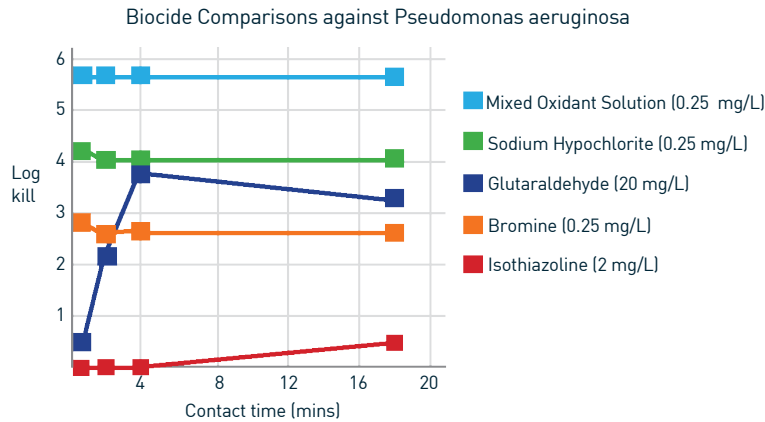
MIOX systems are NSF61 certified for drinking water treatment. Mixed Oxidant Solution is a proven treatment for a more rapid and thorough inactivation of a wide range of microbial contaminants, including species highly resistant to chlorine.



**ELECTROLYSIS PROCESS**  
The electrolytic cell of a MIOX on-site generator uses common salt combined with water and electricity to generate high performance disinfection chemistries, eliminating the need to transport and store hazardous chemicals.

## IMPROVE ANIMAL HEALTH

MIOX Mixed Oxidant Solution (MOS) significantly decreases bacteria in poultry drinking water including coliform, E.coli, Pseudomonas aeruginosa, and other bacteria that affect chicken health. By cleaning water lines and cooling pads and preventing cross-contamination, poultry farms using MOS have decreased or completely eliminated antibiotics consumption.



## ELIMINATE EXPENSIVE CHEMICALS

Eliminate the use of all other disinfectants, surfactants, and cleaners including corrosive chemicals for line flushing and cooling pads.

Use Mixed Oxidant Solution to replace a variety of chemicals:

- Hydrogen Peroxide
- Chlorine Dioxide
- Chloramines
- Calcium hypochlorite
- Bromine
- Sodium hypochlorite
- Iodine
- Quaternary ammonium

## REDUCE MAINTENANCE COSTS

MOS has been shown to remove and prevent the growth of biofilm, algae, and bacteria from coop surfaces and water lines.

### BEFORE



### AFTER 2 WEEKS



Nipple water line

Up to 80% operational cost savings compared to conventional water treatment and disinfection methods.



# MIOX PRODUCT GUIDE

## CUSTOMIZED CHEMISTRIES

MOS HYPO + PEROXIDE



RIO ZUNI



AE SERIES



VAULT



RIO



RIO GRANDE



POULTRY WATER SYSTEMS	18,500 GALLONS/DAY (70 M3/DAY)	1 MILLION GALLONS/DAY (3,500 M3/DAY)
DAIRY FARMS	100 MILK COWS	5,000 MILK COWS
DRINKING WATER	200 PEOPLE	10 MILLION PEOPLE
BEVERAGE LINE CLEANING	1 LINE PLANT	10 LINE PLANT
WASTEWATER	1,000 GALLONS/DAY	100 MGD
COOLING TOWERS	50 TON TOWER	600,000+ GPM RECIRCULATION RATE
	1 LB/DAY	3,000+ LBS/DAY

FROM 1 → 3,000+ LBS/DAY PER GENERATOR

### CASE STUDY 1 Saved \$5,000/cycle

200,000 broiler farm

#### PROBLEM

- Bacteria load too high to count
- Biofilm and algae growth clogging water lines
- Antibiotic resistance
- Ineffective treatment regimen

#### RESULTS

- 100% biofilm removal and prevention
- Clean water lines, zero blockage
- Reduced bacteria load to minimum levels
- Improved mortality rates on "viral challenge" chicks
- Reduced operational cost by 10%/cycle

After 15 days using MOS

	Parameter	Control Treatment	MIOX Treatment
Water Sample	Total Plate Count	10,000 cfu/100ml	900 cfu/100ml
	Coliform Count	180 cfu/100ml	0 cfu/100ml
	E.coli	0 cfu/100ml	0 cfu/100ml
	Pseudomonas aeruginosa	120 cfu/100ml	0 cfu/100ml
	Fungi	20 cfu/ml	0 cfu/ml

### CASE STUDY 2: Decreased antibiotic use by 50%

2 million broiler farm / 12 production sites ~235,000 flock/farm

#### PREVIOUS DISINFECTION

- Biofilm removal: Hydrogen peroxide, peracetic acid
- Line cleaning: Glutaraldehyde, ammonia, iodine
- During cycle: Sodium hypochlorite

#### NEW DISINFECTION

MIOX Mixed Oxidant Solution

#### PROBLEM

- Drinking water contaminated with coliform and E.coli
- Blockage problem in water lines
- Antibiotic resistance
- Viral diarrhea
- Cooling pads covered in algae

	Farm 1	Farm 2	Farm 3 MIOX
Initial Chick Quality	Good	Best	Viral Challenge
Mortality Rate	13%	4.3%	4.2%
Final Age	31 days	31 days	31 days
Final Weight	1.65 kg	1.7 kg	1.75 kg
Antibiotic Expense	\$\$	\$\$\$\$	\$
Water Treatment Cost	\$\$\$\$\$	\$\$\$\$	\$
Total Cost/kg Meat	\$\$\$\$	\$\$\$	\$
FCR	1.65	1.51	1.51

After 7 weeks using MOS

	Parameter	Control Treatment	MIOX Treatment
Water Sample	Coliform Count	TNTC	100 cfu/100ml
	E.coli	30 cfu/100ml	10 cfu/100ml
	Fungi	TNTC	10 cfu/ml

#### RESULTS

- Decrease in Total Bacterial Count including coliform, E.coli and fungi
- Clean water lines, zero blockage
- Decreased antibiotics by 50%
- Improved flock health (FCR + mortality)
- Surfaces and cooling pads clean and algae-free
- Air sanitization through cooling pads



Johnson Matthey

