



POULTRY PRODUCTION CYCLE

Reduced contamination level and improved production performance and profitability

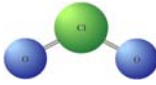

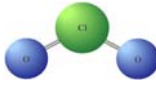

The only way to address and eliminate biofilm risks is to strip the biofilm, prevent its re-growth and kill the microbial contamination



Benefits dutrion[®] "golden" Chlorine Dioxide:

- Improves performance of birds!
- Very fast and long active in waterlines compare to other sanitizers
- Does not have pH limitation and is not corrosive for equipment
- Final elimination of (waterborne) pathogens in poultry barns
- Effective & fast sanitation program with spraying & fogging
- High efficacy against E.coli, Salmonella, Listeria, Aspergillus, Penicillium, Staphylococcus
- Easy to apply, easy to monitor and very safe
- Very cost effective compare to all other disinfectants
- NO INVESTMENT COSTS TO START; use regular dosing pump

Advantages dutrion[®] on poultry farms

<u>BROILER SHEDS</u>	<u>LAYER & BREEDER HOUSES</u>
 	 
Proven Return on Investment (R.O.I.) Improves FCR (feed conversion rate) Better growth potential Low investment per bird (0.005 – 0.01 \$) Improves uniformity of flock Lower mortality rate Condemned % declines Less chance health problems occur Approved for poultry drinking water	Proven return on Investment (R.O.I) Lower mortality rate Better egg shell quality Less feed costs Longer egg production cycle Extra water intake Clean lines for adding water soluble feed additives Always pure water till the far end Long lasting activity with high/low water flow
<u>EASY TO APPLY PER SHED OR ON WHOLE FARM</u>	<u>EXTREME EASY TO APPLY IN EACH BARN</u>
<u>UNIQUE WATER SANITATION PROGRAM</u>	<u>THINK OF HATCHERY ADVANTAGES TOO</u>

PRACTICAL EXAMPLE: 45,000 broilers per flock @ \$ 0.01 investment costs per bird with DUTRION

	<u>BEFORE (Peroxide)</u>	<u>FLOCK 1 (DUTRION[®])</u>	<u>FLOCK2 (DUTRION[®])</u>
FCR	1.81	1.74	1.71
Mortality %	3.92	2.54	2.99
Condemned %	0.85	0.24	0.50
Growth/ day in grams	59.46	59.16	63.33

dutrion[®]; low investment, high return

dutrion[®] available in unique tablets



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PATHOGEN REDUCTION AT SLAUGHTER

Benefits **dutrion**[®] Chlorine Dioxide!

CLO2 Germicidal Spectrum **Bacteria**

Pseudomonas Aeruginosa
Campylobacter Jejuni
Pseudomona Specie
Flavobacterium Species
Enterobarcer Cloaceae
Yersinia Enterolitica
Enterobarcter Hafnia
Clostridium Sporogenus
Proteus Vulgaris
Clostridium Dificile
Klebsiella Pneumoniae
Clostridium Perfringens
Salmonella Typhi
Fusobacterium Nucleatum
Salmonella Enteritidis
Bacilus Subtilis
Salmonella Gallinarum
Bacilus Circulans
Salmonella Typhimorium
Bacilus Megatarium
Salmonella Choleraesuis
Bacilus Cereus
Salmonella Typhosa
Bifedibacter Liberium
Corynebacterium Nucleatum
Staphylococcus Aureus
Sarcinae Lutae
Staphylococcus epidermia
Streptococcus Pyrogenes
Streptococcus Faecalis
Strep 1, 2, 3.
Mycobacteroi Bovis
Mycobacterium Smegmatis
Mycobacterium kansaaii

- Removal of biofilm which hinders efficiency of equipment
- Longer life of equipment, less down time
- Consumer confidence and acceptability
- Disinfection (sterilization) capabilities are not diminished at all in the presence of fats, oils, proteins, body fluids etc. because it has very selective and very few chemical reactions
- Strongly soluble in water, therefore, it has a long-lasting residual which reduces the potential for cross infection or re-contamination
- Broad spectrum, fast acting disinfectant, effective against a wide range of bacteria, spores, fungi, and viruses at relatively low concentration and short contact periods
- It is colorless, has a mild medicinal odor and removes if any odor, low corrosively to metals and the lowest acute toxicity rating from EPA
- High efficacy against E.coli, Salmonella, Listeria, Aspergillus, Penicillium, Staphylococcus etc
- High efficacy is obtained irrespective of pH
- Non-corrosive and non-staining of equipment
- Easy to apply and to monitor
- Meets HACCP (food safety) management requirements
- Cost Effective in many applications

CLO2 Germicidal Spectrum **Fungi**

Candida Albicans
Trichophyton Rubrum
Scopulariosis Species
Aspergillus Niger
Trichophyton Mentagrophytes
Aspergillus Flavus
Mucor Species
Fusarium Specie
Saahromyces Cerevisiae
Fonsecaea Pedrosoi

Virus

Herpes Virus I
Poliovirus
Herpes Virus II
Encephalomyocerditis (EMS)
Adenovirus Echovirus
Vaccina Virus
Coxsakiavirus
Vesicular Stomatitis Virus (VSV)
Influenza
Para Influenza
Feline Parvovirus
Bluetongue Virus
Mouse Flu
Mouse Hepatitis Virus (MHV)
Minute Virus of Mice (MVM)
Mouse Encephalomyelitis Virus
New Castle Disease Virus
Mouse Polio Virus (MEV)
Iridovirus
Pertiviries – Togaviridae

Others

Vidrio Cholerae
Culex Quinquifasiatus
Mycoplasma



The chlorine dioxide process is "extraordinarily" better than other chemical methods of eliminating pathogens.



Powerful Water Treatment

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