

A collage of farm animals including a large group of white chickens with red combs, a pig drinking from a metal nozzle, and a cow drinking from a trough. A semi-transparent blue rectangle is overlaid on the center, containing the main title in yellow text.

Safrax[®] Chlorine Dioxide for Livestock & Poultry Farming



SAFRAX® CHLORINE DIOXIDE FOR LIVESTOCK & POULTRY FARMING: A REVOLUTIONARY SOLUTION FOR HEALTHIER OPERATIONS



Welcome to the Future of Farming!

Safrax® chlorine dioxide presents a breakthrough in livestock and poultry farming, providing a powerful and versatile solution for enhancing animal health, improving productivity, and ensuring a safer environment.

Explore the transformative benefits of Safrax® chlorine dioxide in your farming operations.

Safrax® chlorine dioxide is a cutting-edge disinfection solution designed to address the unique challenges faced by livestock and poultry farmers.

Unlike traditional methods, Safrax® chlorine dioxide offers unparalleled effectiveness in promoting a healthy and hygienic environment.

Solution for Pathogen Eradication in Buildings and Animals



Experience the unparalleled power of Safrax® ClO₂ in eradicating pathogens from both buildings and animals.

Our fast-acting and broad-spectrum biocide redefine biosecurity standards, ensuring a safe and disease-free environment.

Explore the numerous benefits of Safrax® ClO₂, the ultimate solution for preventing epidemics and safeguarding your operations.



Key Features:

1 - Complete Eradication of Pathogens:

- Safrax® CIO2 is designed to completely eradicate a wide range of pathogens, offering a thorough defense against disease-causing agents.

2 - Fastest-Acting and Broadest Spectrum:

- Benefit from the fastest-acting and broadest spectrum biocide available, providing swift and effective pathogen control.

3 - Zero Environmental Impact and No Residues:

- Safrax® CIO2 ensures no environmental impact and leaves no residues on animals, prioritizing both effectiveness and eco-friendliness.

4 - Prevention of Epidemics:

- Implementing Safrax® CIO2 protocols prevent and decrease the risk of epidemics, fortifying biosecurity measures on farms and ensuring the well-being of animals.

5 - Highly Effective Surface Disinfectant:

- Use Safrax® CIO2 to disinfect surfaces, machinery, equipment, and tools, maintaining a high level of hygiene across your entire operation.

Biosecurity Reinforcement: Safrax® CIO2 plays a crucial role in strengthening biosecurity on farms, particularly in mitigating the risk of disease outbreaks such as Avian Flu.

Our chlorine dioxide has demonstrated its ability to **eliminate avian flu within 7 days**, providing a rapid and reliable solution for disease control.

Animal Drinking Water Sanitation



Discover how Safrax® chlorine dioxide transforms poultry farming by ensuring optimal water quality, improved animal health, and unparalleled performance.

This comprehensive solution goes beyond traditional methods, offering benefits such as improved growth, enhanced uniformity, and increased farm-to-plate production.

Key Features:

1 - Improved Animal Growth and Uniformity:

- Safrax® ClO₂ optimizes flock performance, leading to improved animal growth, enhanced uniformity, and better overall flock health.



2 - Enhanced Bird Health:

- Compared to standalone acidification and sanitation methods, Safrax® CIO2 contributes to superior bird health, reducing mortality rates and promoting a thriving flock.

3 - Reduced Slaughter Age and Faster Growth:

- Experience a reduction in slaughter age, faster growth, and an improved feed conversion ratio (FCR) with the implementation of Safrax® CIO2.

4 - Increased Farm-to-Plate Production:

- Safrax® CIO2 boosts the production of Grade "A" birds, delivering a remarkable benefit of over "100 grams" per bird for a higher-quality end product.

5 - Lower Mortality Rates:

- Enjoy mortality rates up to 10% lower than controls (2.16%), showcasing the effectiveness of Safrax® CIO2 in safeguarding the health of your flock.

Antibiotic Restrictions:

As antibiotic use faces heavy restrictions, Safrax® CIO2 emerges as an essential solution for eliminating infectious diseases at the source – the water supply. Ensure a sustainable and healthy poultry farming environment with Safrax® CIO2.

Elevate your poultry farming operations with Safrax® CIO2, the ultimate water sanitation solution. From improved growth and uniformity to enhanced bird health, Safrax® CIO2 is the key to unlocking the full potential of your flock. Join the movement toward a healthier, more productive future in poultry farming.

Benefits of Safrax® ClO₂ in Animal Drinking Water Treatment



Unlocking Optimal Health and Growth in Livestock:

1 - Fast Action:

- Safrax® ClO₂ eliminates bacteria and sanitizes water within minutes.
- Treatment of drinking water at > 0.5 ppm is sufficient to control most harmful bacteria.

2 - Not pH Sensitivity:

- Unlike chlorine and bromine, which are sensitive to pH changes, Safrax® ClO₂ remains effective in a broad pH range (2-11).
- Ensures consistent and reliable water disinfection regardless of pH variations.

3 - Weight Gain Promotion:

- Promotes Animal Hydration and Faster Weight Gain:
 - Safrax® ClO₂ encourages animals to drink more water, contributing to faster weight gain.
 - Optimal hydration supports overall health and enhances growth rates in animals.

Conclusion: Experience the unparalleled benefits of Safrax® ClO₂ in animal water treatment. From rapid action against bacteria to pH-insensitivity and weight gain promotion, Safrax® ClO₂ stands as a superior solution for ensuring optimal health and growth in your animals.

Case Study I: Accelerating Chicken Growth and Size with Safrax®



Safrax® ClO₂ Implementation in Instituciones Pecuarias Dominicanas (IPD):

- **Improved Weight Gain Efficiency:** Birds demonstrated increased weight gain in relation to food consumption, optimizing overall feed efficiency
- **Reduced Growth Cycle:** The Cobb500 race, previously completing a full cycle in 42 days, now achieves the same cycle in just 39 days, resulting in a significant reduction of 3 days per cycle
- **Enhanced Energy and Vitality:** Birds exhibited heightened energy levels and vivacity, indicating improved health and well-being.

Case Study II: Improving Milk Production in the Dairy Industry



In 1999, the European Community (EU) banned the importation of US-produced milk due to high somatic cell count and bacteria count limits. The EU set the limits at 400,000 and 100,000 respectively, while the US limits were considered too high at 750,000 and 200,000. This led to the prohibition of milk imported from the US.

Reduced Somatic Cell Count

A dairy farm conducted tests using Safrax® ClO₂ with 1500 dairy cows. Within 14 days of implementing Safrax® ClO₂, the somatic cell count in the milk dropped from 250,000 to 147,000. This improvement allowed the dairy farm to secure a higher price for its milk.

Increased Milk Production

Increased milk production was also observed in a dairy operation with 1000 cows. The volume of water consumed by the cows increased from **97,000 liters/day to 105,000 liters/day within six weeks**. As a result, the **milk production per cow increased by 2 to 3 liters per day**, without the use of bovine growth hormones (BST).

These results demonstrate the significant impact of clean water on milk quality and quantity in the dairy industry. Clean water directly contributes to a higher milk output of better quality, leading to improved financial performance.

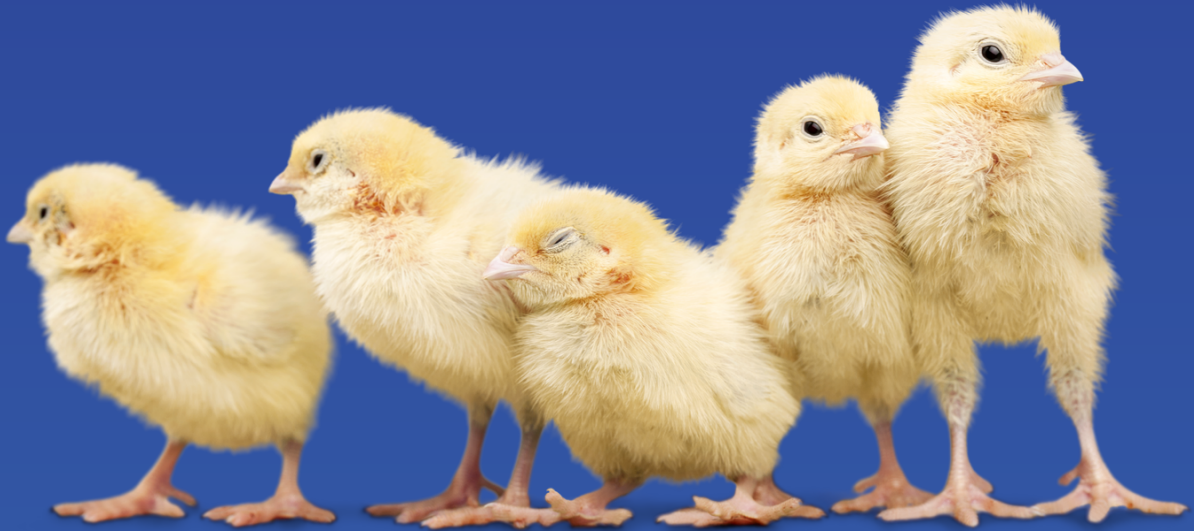
Milk Quality

The Pasteurized Milk Ordinance (PMO) sets safety standards for Grade A milk intended for human consumption. While somatic cell count regulations in raw milk aim to protect public health, there are ongoing efforts to further reduce the regulatory limit from the current 750,000 cells/ml to 400,000 cells/ml or less. This is driven by the desire to enhance the safety of dairy products and meet import standards for Europe.

Grade A and Grade B: Historically, milk has been classified into two grades: Grade A and Grade B. The grade designation is based on meeting specific health and sanitary standards. These standards encompass somatic cell count, bacterial count, and the condition of farm facilities including the milking parlor, milk storage tank, and water well.

Case Study III:

INACTIVATION OF INFECTIOUS BURSAL DISEASE



Infectious bursal disease (IBD), also known as **Gumboro disease**, **Infectious bursitis** or **Infectious avian nephrosis**, is a highly contagious disease affecting young chickens and turkeys. It is caused by the Infectious bursal disease virus (IBDV) and is characterized by immunosuppression and a mortality rate typically occurring between 3 to 6 weeks of age.

Pathogenesis

The classic strains of Infectious bursal disease (IBD) can result in mortalities ranging from 10 to 50%, whereas the very virulent strains can cause mortalities of 50 to 100% within a span of just 4 days. The incubation period for IBD is typically 2 to 3 days.

Transmission

The highly resistant Infectious bursal disease virus (IBDV) can persist in poultry environments for months. It is transmitted through direct contact with infected birds or contaminated surfaces, and can also be spread by wild birds, insects, and humans. The virus is stable and resistant to various disinfectants, but can be inactivated at high pH levels and temperatures.

Symptoms

The disease typically manifests in birds from 3 days post-infection until 21 days of age. In its acute or classic form, observed in birds aged 3 to 6 weeks, symptoms include pecking, depression, white diarrhea, vent gleet, anorexia, ruffled feathers, lethargy, and sudden death. The subclinical form, commonly found in birds under 3 weeks of age, is associated with growth retardation alongside other diseases.

Necropsy findings often include dehydration, hemorrhages in thigh and pectoral muscles, increased intestinal mucus, and nephritis. Initially, the bursa shows enlargement with edema and hyperemia, followed by atrophy of the lymphoid tissue, areas of necrosis, and hemorrhage. Mild splenomegaly may also be present.

During the first outbreak on a farm, the disease is most acute with the highest mortality rate. Subsequently, it becomes a subclinical disease in young birds due to the presence of maternal antibodies.

Application and Treatment

- **Water for Animal Consumption**

Treatment of drinking water with Safrax[®] chlorine dioxide > 0.8 ppm is sufficient to inactivate IBDV.

- **Surface Disinfection**

Facilities Without Animals: Fumigation or spraying from 100 to 500 PPM.

Facilities With Animals Present: Fumigation or spraying at 25 PPM.



**SAFRAX IS THE FIRST COMPANY TO
MANUFACTURE A READY-TO-USE CHLORINE
DIOXIDE SOLUTION, HOLDING A PATENT
SINCE 2011**



U.S.A.

**SAFRAX Inc.
8 The Green
Dover, DE 19901**

Email: info@safrax.com

Europe

**SAFRAX S.A.
66 Ave des Champs Elysees
75008 Paris, France**

Email: france@safrax.com

China

**SAFRAX Biotechnology
China World Office 1
No.1 Jianguomenway
Beijing 100004**

Colombia

**SAFRAX Colombia S.A.S.
Av. El Poblado #5A-113
Medellin**

Email: colombia@safrax.com

Dominican Republic

**GLOBAL 7 SRL
Av Rómulo Betancourt
Santa Domingo**

Email: clo2@safrax.com

**Kazakhstan Kyrgyzstan
Uzbekistan Russia Belarus
Armenia**

**BSD SOLUTIONS LLP
Markova St 28A
050040 Almaty Kazakhstan**



**UNITED NATIONS
GLOBAL MARKETPLACE**

SAFRAX INC.

NUMBER: 873938

AUTHORISED SUPPLIER

Email: samir.elias@safrax.com

RESELLERS:



www.safrax.com