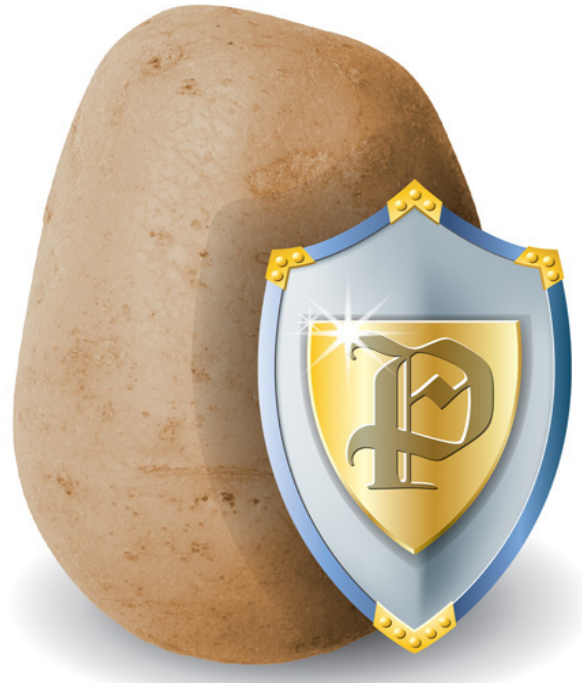


# Purogene®

premium-blend  
CHLORINE DIOXIDE



## **Purogene® is the most effective, fast-acting, broad-spectrum antimicrobial available.**

Purogene® is a premium-blend chlorine dioxide solution crafted specifically to eliminate gram-positive and gram-negative bacteria, yeasts, mold and fungi, and is scientifically proven to be a powerful, broad-spectrum antimicrobial.

A pioneering product in specialty chlorine dioxide, Purogene is regarded as the best line of defense for potato disease management. With the outbreak of *Phytophthora infestans* (Late Blight), Purogene is not only effective in controlling this organism, but a wide range of other tuber-related diseases and spoilage organisms. In addition to its powerful antimicrobial properties, Purogene also eliminates odors without affecting nutritional quality. Purogene's formulation is virtually odorless and environmentally friendly. Because of its stability, Purogene can be stored and transported with no special consideration.

Used in misting applications and pre-storage rinse, Purogene controls many microbial activities. Depending on conditions, Purogene is used at concentrations of between 200 and 400 ppm.

Simply activate the Purogene solution with food-grade acid per directions. This activation produces Chlorine Dioxide, a highly effective microbial and enzymatic inhibitor. The activated Purogene solution is then diluted and applied to potatoes in accordance with the label directions. Bio-Cide International makes a variety of equipment that can be used for dilution and application as needed, specifically for a storage shed. Ask your distributor for more information on these systems.

Used properly, Purogene is non-corrosive, easy to use and, most importantly, safe.

Purogene is classified as a non-hazardous compound and does not require any special US DOT permits.



Exceptional Chemistry • Extraordinary People  
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Bio-Cide International is ISO 9001:2008 certified

## P O T A T O R E S U M E

Bio-Cide International pioneered stored-potato pathogen control in the early 1970s, working with academicians, government and industry.

Cooperative research and testing began with Michigan State University as well as the University of California, Berkeley to determine Purogene's effectiveness against potato bacteria and fungal pathogens. The positive results of that testing has resulted in the milestone accomplishments controlling disease that we see today.

Recent work performed by the USDA, Michigan State University, North Dakota State University and the University of Manitoba substantiated earlier studies as to Purogene's effectiveness. Not only does Purogene control the Late Blight organism but also controls other soft and black rot organisms which make conditions for Late Blight much worse. Bio-Cide contributed donated resources for the construction of the University of Idaho experimental research station at Kimberly, ID to help advance a variety of potato research activities. Bio-Cide has also committed itself to accumulating the enormous amount of technical data required to gain full Section 3 approval as dictated by new directives under the Food Quality Protection Act.

## B E N E F I T S

- Ultra high, broad spectrum antimicrobial activity
- Uniquely effective against biofilm
- Effective over a broad pH range (1-10)
- Low corrosion potential at use concentrations
- Resists neutralization due to organic load
- Completely soluble in water
- Does not chlorinate (no THM formation)
- Long lasting bacteriostatic activity
- Excellent deodorant
- No effect on organoleptic properties
- No effect on nutritional quality
- KOSHER certified
- Economical to use
- Can be used with automated delivery systems
- Safe for applicators (PPE required)
- No unusual stipulations on storage



## P R O D U C T S P E C I F I C A T I O N S

- Concentration: 2.0 - 2.10% available chlorine dioxide
- Appearance: Colorless liquid
- pH Concentrate: 8.2 - 8.5
- Boiling point: 213° F (100.5°C)
- Melting point: N/A
- Freezing point: 28.9° F (-1.72°C)
- Vapor Pressure: 23.7 mm Hg (25°C)
- Vapor Density: 0.02 kg/m<sup>3</sup>
- Specific Gravity: 1.03 g/ml (20°C)
- Volatiles (by volume): 97% water
- Solubility in water: Complete
- Evaporation rate: Comparable to water
- Very low acute toxicity (EPA Cat III)
- Non-Flammable, Non-Explosive
- Stable Solution
- NFPA Rating:  
Fire: 0 Health: 1 Reactivity: 1 Special: None