

Chlorine dioxide, the active ingredient in E-Cide, provides MORE benefits and advantages.

Active Ingredient	Chlorine Dioxide	Quantemary Ammonium	Hydrogen Peroxide	Hypochlorite	Paracetic Acid	Lodophors	Gluteraldehyde	Ozone	Hydroxyl
Kill Time	Seconds	Minutes To Hours	Minutes To Hours	Minutes To Hours	Minutes	Minutes To Hours	30 Minutes To Hours	Minutes To Hours	Minutes To Hours
Broad Spectrum	✓	✗	✗	✓	✓	✓	✗	✓	✓
Kills Gram Negative Bacteria, Tuberculosis, Pseudomonas	✓	✗	✓	✓	✓	✓	✗	✓	✓
Kills Complex Organisms (cycsts, spores, protozoa)	✓	✗	✗	✗	✓	✓	✗	✓	✓
Prevents Bacterial Adaptation	✓	✗	✓	✗	✗	✓	✗	✓	✓
Efficacy Not Diminished by Organic Contamination (blood, body fluids)	✓	✗	✗	✗	✗	✗	✓	N/A	✗
Efficacy not dependant on pH Levels	✓	✗	✗	✗	✗	✗	✗	N/A	✓
Non-corrosive	✓	✗	✗	✗	✗	✗	✗	✗	✗
No Carcinogens	✓	✗	✓	✗	✓	✓	✗	✓	✓
Deodorizes	✓	✗	✗	✗	✗	✗	✗	✓	✓
Works on Biofilms	✓	✗	✗	✗	✗	✗	✗	✗	✗
Eliminates Chemical Contaminants	✓	✗	✓	✗	✗	✗	✗	✓	✓
Effective at High Temperature	✓	✓	✗	✗	✗	✓	✗	✓	✓
Safe on Soft Fabrics	✓	✗	✗	✗	✗	✗	✗	✗	✗
Color Safe	✓	✓	✗	✗	✗	✗	✗	N/A	✗
No Harmful Environmental Residues	✓	✗	✓	✗	✓	✓	✗	✓	✓
Waste stream Compatible	✓	✗	✓	✗	✗	✗	✗	N/A	✓

Envirotek's drop-and-go technology turns water into a powerful liquid disinfectant.

The ULTIMATE Medical Waste Disinfectant.

- Effective at low concentrations
- No harmful chemical footprint
- Does not corrode equipment
- More stable
- Longer shelf life
- Safe to handle



Developed **exclusively** for use with Envirotek Medical Waste Treatment Systems

The **ULTIMATE** medical waste disinfectant



Envirotek is a contract manufacturer of antimicrobial and biocide products. These products are based on stabilized proprietary chlorine dioxide technology, designed exclusively for use with Envirotek biomedical waste treatment systems.

Chlorine dioxide applications were originally developed for water treatment, animal health environments, household and agricultural purposes. The safe and effective use of chlorine dioxide created a positive market reaction that encouraged the expanded use in larger, commercial applications, where it has been approved by the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA) and the United States Department of Agriculture (USDA).

The Science Behind E-Cide.

E-Cide kills pathogens by a chemical process known as oxidation. It breaks down the walls of microbes, effectively disintegrating them. Oxidized organic molecules cease to perform their functions. When the damage is widespread, death of the organism is inevitable. In contrast to chlorine, the oxidation occurs merely by electron transfer. Chlorine dioxide DOES NOT 'halogenate' the molecules it oxidizes.



Powerful and Effective.

Chlorine dioxide, the active ingredient in E-Cide, kills some of the most lethal, hard-to-kill, resistant pathogens such as Ebola, MRSA, anthrax, norovirus, pseudomonas aeruginosa, C diff and spores, to name a few. Tests in independent laboratories have confirmed that chlorine dioxide is one of the best disinfectants available in terms of the broad spectrum of microorganism it kills. In fact, chlorine dioxide is so effective, it is used to sterilize the autoclaves that sterilize medical, surgical and dental instruments.

Fast

E-Cide is one of the fastest disinfectants available today. Independent laboratory tests have confirmed that

E-Cide eliminates harmful viruses within 30 seconds. Other disinfectants can take up to 30 minutes – hours to kill the same germs. In our fast-paced world, the faster a disinfectant works, the better it works.

Prevents Microbial Resistance

Many viruses and bacteria are becoming resistant to antibiotics and disinfectants, creating worldwide healthcare challenges. Because of the way E-Cide works, by destroying the cell membrane through oxidation, microbes cannot build up any resistance

Leaves No Trace

E-Cide disinfects and then disappears. Unlike other disinfectants, it does not leave behind product build up or harmful residues. This is important

because any remaining surface build up can actually attract more germs, making disinfection more difficult. In addition, E-Cide leaves behind no volatile organic compounds (VOCs) or carcinogenic byproducts, like other commonly used disinfectants

Effective Against Bio-Slime

The chlorine dioxide molecule has unique chemical characteristics which make it a popular choice to fight both surface level and deep layer bio-slimes. Chlorine dioxide has an inherent "capacity" to remove electrons from organic matter; it is 2.5 times more powerful than Ozone, which makes it more effective at disrupting and dislodging bio-slime.



Environment Friendly.

Chlorine dioxide ends up releasing oxygen and forming NaCl (salt) in water. These are the exact considerations which convinced the EPA in 1983 to recommend chlorine dioxide as the ideal disinfectant for potable water treatment, as it does not produce THMs and other harmful by-products. Once applied, the Chlorine Dioxide naturally dissipates leaving no harmful residue. It basically vanishes, taking with it odor and pathogens.

Safe Byproducts.

E-Cide is an ideal choice for today's environmental expectations. It leaves no harmful chemical footprint. There are no carcinogens or poisonous residuals. And it does not chlorinate organic material, significantly decreasing trihalomethanes (THMs), haloacetic acids (HAAs) and other chlorinated organic compounds associated with odor and pathogen control treatments.

**Bottom-line...
E-Cide is the most advanced and ecological hospital disinfectant for a cleaner planet.**

Advantage of Solid Form Disinfectant

E-Cide disinfectant comes in a dry form tablets packaged in an easy to open plastic bottle. Our drop-and-go technology turns water into a powerful liquid disinfectant. There are many advantages for a dry form disinfectant:

- Minimal storage space without temperature control requirement.
- Easier for transportation
- More stable and longer shelf-life
- Safer to handle.

Long-lasting Efficacy

Chlorine dioxide will not react with any organic molecules it isn't aimed at. This means more of it will remain available (the residual) to inhibit regrowth of bacterial colonies. Furthermore, even if it gets diluted or partially used up, any little amount left will adequately keep guard against regrowth because it is still highly effective at low concentrations. Another reason for its longer efficacy is that bacteria cannot develop resistance against it over time.

Corrosion Inhibition

E-Cide DOES NOT cause corrosion or react with our equipment.

Greater Ability to Kill at Lower Concentrations.

Oxidation capacity illustrates strength to attract electrons; higher oxidation capacity signifies greater ability to eliminate more pathogens using less disinfection concentration than any other known disinfectant.



Effective at Low Concentrations

Chlorine Dioxide is the most effective powerful oxidizing action. Even low concentrations are enough to kill pathogenic bacteria and viruses.

For example, an equivalent amount of another disinfectant such as chlorine will be much less effective as most of it would be lost in undue reactions, reducing the amount of available active disinfectant.

Disinfection Concentration	
Tested in a 5-log Reduction after 60 seconds. Test organism: Staphylococcus Aureus	
	Concentration (ppm)
Chlorine Compound 1 Sodium Hypochlorite	1,000
Chlorine Compound 2 Stabilized Chlorine Dioxide	1,200
Iodophors	440
Peroxide	68,000
Glutaraldehyde-Phenol	1,200
Acid Glutaraldehyde	2,200
Acified Quat	1,200
Phenolic	380
Peracetic Acid	400
Chlorine Dioxide	5

E-Cide EFFICACY				
E-Cide	Ozone (O2)	Peroxide (H2O2)	Sodium Hypochlorite	Chlorine Dioxide
Oxidation Potential (Volts)	2.07	1.78	1.49	.95
Oxidation Potential	2e-	2e-	2e-	5e-