SABRE TECHNOLOGIES

Company Profile

- Industry-changing technology for the control of microorganisms – designing and implementing biosecurity, decontamination and protection systems
- Over 70 issued patents relative to chlorine dioxide
- Peer Reviewed publications under cooperative research and development agreements with USDA, US EPA and other government agencies

Track Record of Success

Buildings affected by 2001 anthrax bioterrorism
- Hart Senate Office Building, Daschle Suite
- Postal distribution centers (17 million ft^3)

Large buildings with bacterial/viral contamination
- Biopharmaceutical manufacturing facilities
- Hospital with pervasive mold
- Ready-to-eat food processing plant

Chiller Loop Treatment
- Large universities
- Vehicle assembly plants

Mold treatment following natural disasters
- Malls, offices, churches, restaurants

Large-scale animal disease outbreak response
- Highly pathogenic avian influenza (HPAI)

Biofilm & Legionella

Bacteria can spread in water systems such as:
- Cooling towers & chillers
- Drinking fountains
- Showerheads
- Sink faucets
- Decorative water features
- Large plumbing systems

Legionella reproduction can be heightened to dangerous levels when biofilms form on the surfaces of both hot and cold potable water systems as well as the building's heating and cooling water systems. It may lead to Legionnaires disease.

The Protection Against Legionella regulation in NYS requires a disinfection treatment of cooling towers and chiller water loops to control bacterial growth.

Bacterial Water Treatment with DiKlor®

Bacteria cannot build tolerance to chlorine dioxide.

Chlorine dioxide is a broad-spectrum microbiocide that has been used for over 70 years as a drinking water disinfectant. **DiKlor®-S** is a pure chlorine dioxide solution which is more efficacious, easier to apply and measure, and safe to store.

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Why are biofilms a problem?

Biofilm problems include decreased equipment efficiency and increased corrosion of equipment.

Microbiologically induced corrosion (MIC) rapidly destroys capital equipment through pitting. Biofilm deposits are better insulators than almost any scale type, increasing energy costs.

In addition to high economic loss, biofilm formation may also pose a serious health risk associated with the presence of pathogens including species of Legionella and free-living protozoa

Benefits of ClO_2 Treatment

The removal of biofilm dramatically increases heat transfer and lowers energy cost and reduces corrosion rates which extends equipment life and lowers capital expenditures over time.

ClO_2 is an EPA Approved biocide.

REPLENISH™

- Vehicles generate 3 g/L ClO_2 (DiKlor®-S), onsite and guarantees the eradication of Legionella and other harmful bacteria in the water system for 4-6 weeks.
- We connect to the water system at customer site in a closed loop and treat the entire system leaving a slight residual with DiKlor®-S
- No hardware installed or left on customer location
- As-needed basis (monthly, quarterly, etc.)

- Option for Replenish™ program to return monthly and refill onsite tank.
- Flow paced to treat the water system on a pulsing or continuous basis

More Commonly Known Technologies

- High temperature eradication
- Copper and Silver Ion Generators
- Monochloramines
- Ultraviolet Light or Ozone
- Installed Chlorine Dioxide Generators
- Chlorine

These technologies are more costly and ineffective.

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