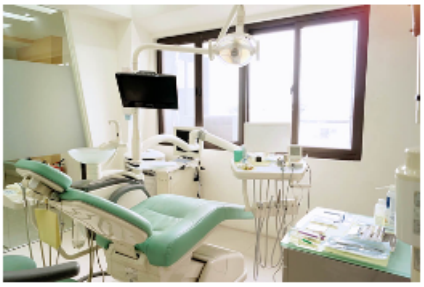
BioSure PROFESSIONAL

POWERED BY BES ELECTROLYTIC CELL

Electrolytic Ozone & Hydrogen Experts








Food Safety & Sanitation

Food Processing & Central Kitchen
Hotel Kitchen & Food Service
Grocery & Supermarket
Water Hygiene & Sanitary Ice
Handwashing & Surface Sanitization

Hygienic Environment

Commercial & Coin Up Laundry
Dental Clinic & Hospital
School & Nursing Facility
Veterinary & Pets Care
Cruise Lines

Clean & Pure Water

Drinking/Bottled Beverage Production
Ultra-pure/RO/DI Water Disinfection
Agricultural, Fishery & Husbandry
Biofilm Treatment (Waterlines)
Legionella Control (Cooling Tower)

BioSure PROFESSIONAL

The World's Most Powerful Natural Disinfectant

Ozone kills E. coli approximately 3,000 times faster than chlorine. In fact, 1ppm dissolved Ozone is equivalent to 50ppm concentration of Chlorine in terms of oxidation performance, hence ozone is capable of eliminating a wider range of strains of bacteria, viruses and other waterborne microorganisms and pathogens. In 1991, the US Environmental Protection Agency (EPA) confirmed that Ozone is the most effective primary disinfectant available for drinking water.

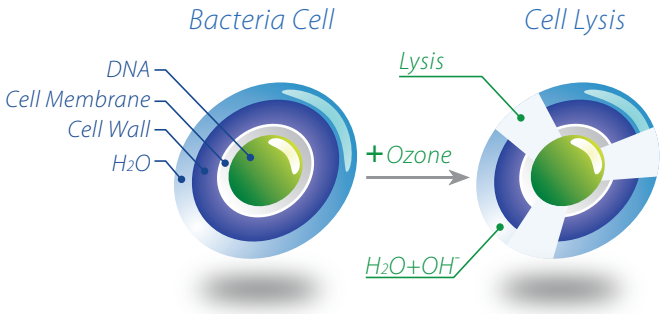
With its powerful disinfection and sanitation properties, Ozone has been used to protect public health through drinkingwtaer and wastewater treatment for more than 100 years. It has been proven to be a safe and effective antimicrobial, sanitizer and disinfectant in numerous commercial and industrial applications.

- *Eliminates all known viruses, bacteria, parasites, fungi, algae, protozoa, and other microorganisms*
- *Removes and decomposes odors, pesticides, chemicals and detergents*

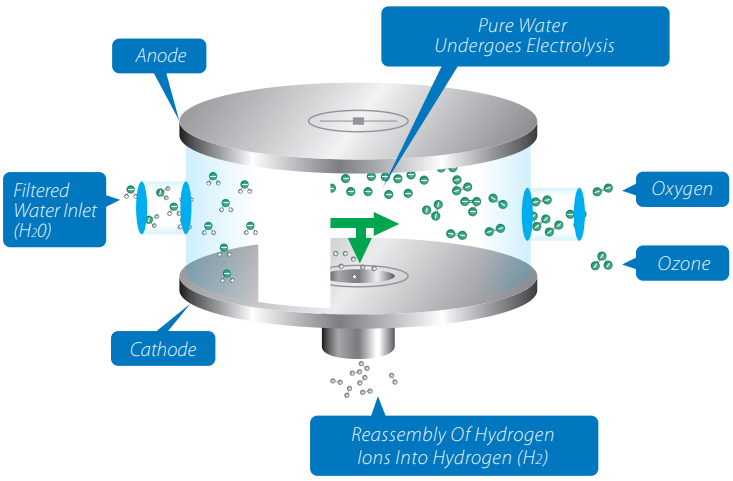
Ozone's Bacterial Disinfection Mechanism

Structure of a bacteria cell and disinfection process :

Ozone oxidizes the bacteria's cell membrane which causes lysis. It also inhibits and blocks operation of the enzymatic control system. The Pathogen is unable to develop immunity to highly concentrated ozonated water, unlike other chemicals.



BioSure's Electrolytic Ozone Generation



Powered by BES

The world's most advanced ozone generation technology in all Biosure Products

iEOG - Leading Technology

Applied electricity to water generates highly concentrated Ozone and Oxygen without harmful byproducts (e.g. NOx)

Environmentally Sustainable

BioSure's dissolved ozone is powerful and environmentally friendly, reliable, safe and cost effective to operate

Proprietary Technology

BES Group has over 40 world-wide Patents for this techology and advanced past the need for extraneous equipment and feed gas which are no longer required

Manufactured according to ISO 9001 Quality Control Standards.

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POWERED BY BES ELECTROLYTIC CELL

Technology Proudly Passed the Testing Process Managed by Campden BRI on Terminal Sanitizer Efficacy Test

BioSure Ozonated Water Efficiency Test by SGS

Test Item			0sec	5sec	15sec	Reduction(%)
Antimicrobial Efficiency Test	Staphylococcus aureus	(CFU/ml)	$5.4x10^5$	Not Detected	Not Detected	>99.999%
	Escherichia Coli	(CFU/ml)	$2.5x10^5$	6.1x10	< 10	99.99%
	Salmonella	(CFU/ml)	$1.7x10^5$	1.9x10	Not Detected	99.9%
	Pseudomonas aeruginosa	(CFU/ml)	$4.5x10^5$	Not Detected	Not Detected	>99.999%
	Candida albicans	(CFU/ml)	$1.3x10^5$	Not Detected	Not Detected	>99.999%
	MRSA	(CFU/ml)	$1.3x10^5$	Not Detected	Not Detected	>99.999%

SGS

The above test results by SGS show the efficiency of BioSure ozonated water with 5 second and 15 second exposure times for eliminating various microorganisms up to 99.999% and chemicals up to 100%. SGS is the world's leading inspection, verification, testing and certification company. SGS is recognized as the global benchmark for quality and integrity.

Dissolved Ozone vs. Ordinary Chlorine-based Sanitizers:

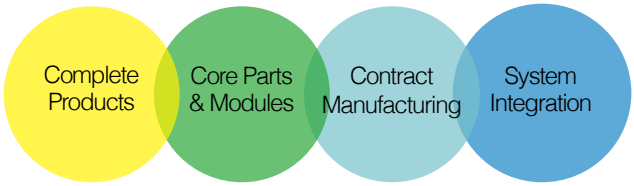
Reacts 3000 Times

50 Times Stronger Oxidation Performance

$O_3 \Rightarrow O_2$ No Chemical Residuals Except Oxygen

About Us

Since 1988, BES Group has been the global leader in electrolytic technology. Converting water to ultra pure activated-oxygen gas and hydrogen gas is our core technology. Series products include Food Safety & Sanitation, Healthy Environment, Clean Water, and Sanitation & Wellness.
All products and components are tested for high performance, safety, and reliability with required certifications from government agencies and leading 3rd party labs.



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ISO 9001 Certified

Technologies applied are protected by one or more of the following patents: US 8,308,914 B2, US 9,757,697 B2, US 9,248,208 B2

Member of EUO3TA.org European Ozone Trade Association

TECHNICAL DATA

OZONE EFFECTS ON SPECIFIC BACTERIA, VIRUSES & MOLDS

Bacteria are microscopically small, single–cell creatures having a primitive structure. The bacteria body is sealed by a relatively solid–cell membrane.
Ozone interferes with the metabolism of bacterium–cells, most likely through inhibiting and blocking the operation of the enzymatic control system.

A sufficient amount of ozone breaks through the cell membrane, and this leads to the destruction of the bacteria. Viruses are small, independent particles, built of crystals and macromolecules. Unlike bacteria, they multiply only within the host cell. They transform protein of the host cell into proteins of their

own. Ozone destroys viruses by diffusing through the protein coat into the nucleic acid core, resulting in damage of the viral RNA. At higher concentrations, ozone destroys the capsid, or exterior protein shell by oxidation so DNA (deoxyribonucleic acid), or RNA (ribonucleic acid) structures of the microorganism are affected.

1–mg/l = 1–PPM

Pathogen	Dosage
Aspergillus Niger (Black Mount)	Destroyed by 1.5 to 2 mg/l
Bacillus Bacteria	Destroyed by 0.2 m/l within 30 seconds
Bacillus Anthracis (causes anthrax in sheep, cattle and pigs. Also a human pathogen)	Ozone susceptible
Bacillus cereus	99% destruction after 5–min at 0.12 mg/l in water
B. cereus (spores)	99% destruction after 5–min at 2.3 mg/l in water
Bacillus subtilis	90% reduction at 0.10–PPM for 33 minutes
Bacteriophage f2	99.99% destruction at 0.41 mg/l for 10–seconds in water
Botrytis cinerea	3.8 mg/l for 2 minutes
Candida Bacteria	Ozone susceptible
Clavibacter michiganense	99.99% destruction at 1.1 mg/l for 5 minutes
Cladosporium	90% reduction at 0.10–PPM for 12.1 minutes
Clostridium Bacteria	Ozone susceptible
Clostridium Botulinum Spores. Its toxin paralyses the central nerve system, being a poison multiplying in food and meals.	0.4 to 0.5 mg/l threshold value
Coxsackie Virus A9	95% destruction at 0.035 mg/l for 10–seconds in water
Coxsackie Virus B5	99.99% destruction at 0.4 mg/l for 2.5–minutes in sludge effluent
Diphtheria Pathogen	Destroyed by 1.5 to 2 mg/l
Eberth Bacillus (Typhus abdomanalis). Spreads typically by aqueous infection and causes typhoid.	Destroyed by 1.5 to 2 mg/l
Echo Virus 29: The virus most sensitive to ozone.	After a contact time of 1 minute at 1 mg/l of ozone, 99.999 killed.
Enteric virus	95% destruction at 4.1 mg/l for 29 minutes in raw wastewater
Escherichia Coli Bacteria (from feces)	Destroyed by 0.2 mg/l within 30 seconds in air
E–coli (in clean water)	99.99% destruction at 0.25 mg/l for 1.6 minutes
E–coli (in wastewater)	99.9% destruction at 2.2 mg/l for 19 minutes
Encephalomyocarditis Virus	Destroyed to zero level in less than 30 seconds with 0.1 to 0.8 mg/l.
Endamoebic Cysts Bacteria	Ozone susceptible
Enterovirus Virus	Destroyed to zero level in less than 30 seconds with 0.1 to 0.8 mg/l.

1-mg/l = 1-PPM

Pathogen	Dosage
Fusarium oxysporum f.sp. lycopersici	1.1 mg/l for 10 minutes
Fusarium oxysporum f.sp. melonogea	99.99% destruction at 1.1 mg/l for 20 minutes
GDVII Virus	Destroyed to zero level in less than 30 seconds with 0.1 to 0.8 mg/l.
Hepatitis A virus	99.5% reduction at 0.25 mg/l for 2-seconds in a phosphate buffer
Herpes Virus	Destroyed to zero level in less than 30 seconds wit 0.1 to 0.8 mg/l.
Influenza Virus	0.4 to 0.5 mg/l threshold value
Klebs-Loffler Bacillus	Destroyed by 1.5 to 2 mg/l
Legionella pneumophila	99.99% destruction at 0.32 mg/l for 20 minutes in distilled water
Listeria monocytogenes (air)	1.0-4.0 PPM for 5 log reduction (time not known)
Luminescent Basidiomycetes (species having no melanin pigment).	Destroyed in 10 minutes at 100-PPM
Mucor piriformis	3.8 mg/l for 2 minutes
Mycobacterium avium (scientifically reviewed document)	99.9% with a CT value of 0.17 in water
Mycobacterium foruitum	90% destruction at 0.25 mg/l for 1.6 minutes in water
Penicillium Bacteria	Ozone susceptible
Phytophthora parasitica	3.8 mg/l for 2 minutes
Poliomyelitis Virus	99.99% kill with 0.3 to 0.4 mg/l in 3-4 minutes
Poliovirus type 1	99.5% destruction at 0.25 mg/l for 1.6 minutes in water
Proteus Bacteria	Very susceptible
Pseudomonas Bacteria	Very susceptible
Rhabdovirus virus	Destroyed to zero level in less than 30 seconds with 0.1 to 0.8 mg/l
Salmonella Bacteria	Very susceptible
Salmonella typhimurium	99.99% destruction at 0.25 mg/l for 1.67 minutes in water
Schistosoma Bacteria	Very susceptible
Staph epidermidis	90% reduction at 0.1-ppm for 1.7 min
Staphylococci	Destroyed by 1.5 to 2.0 mg/l
Stomatitis Virus	Destroyed to zero level in less than 30 seconds with 0.1 to 0.8 mg/l
Streptococcus Bacteria	Destroyed by 0.2 mg/l within 30 seconds
Verticillium dahliae	99.99% destruction at 1.1 mg/l for 20 minutes
Vesicular Virus	Destroyed to zero level in less than 30 seconds with 0.1 to 0.8 mg/l
Virbrio Cholera Bacteria	Bacteria Very susceptible
Vicia Faba progeny	Ozone causes chromosome aberration and its effect is twice that observed by the action of X-rays