



Flexible, Energy-Efficient Advanced Oxidation for Disinfection and Decontamination

BioLargo's Advanced Oxidation System (AOS) offers high-performance water treatment for the decontamination and disinfection of water and wastewater.

Pairing an iodine-based electrochemical advanced oxidative process with proprietary carbon-based substrates, the AOS delivers the highest performance standards with industry-leading energy efficiency.

Highly effective against bacteria and viruses, the AOS is also well-suited for the decontamination of hard-to-treat organic contaminants such as pharmaceuticals and other micropollutants

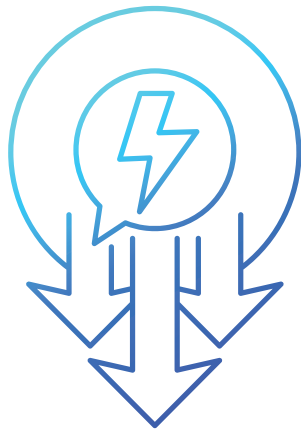
The AOS can be configured to deliver optimized performance for most water or wastewater treatment applications.



Contaminants			
Organic Contaminants	Removal ²	Pharmaceuticals and micropollutants	Removal ²
Naphthenic Acids	>95%	Carbamazepine	88±5%
Phenol	>97%	Ciprofloxacin	96±5%
Benzene	53%	Desvenlafaxine	93±2%
Benzolapylene	*1	Diclofenac	98±1%
Microorganisms	Removal ²	Fluoxetine	89±6%
<i>Escherichia coli</i>	>6 logs	Ibuprofen	79±11%
<i>Salmonella enterica</i>	>6 logs	Levofloxacin	97±1%
<i>Staphylococcus aureus</i>	>6 logs	Sulfamethoxazole	94±8%
<i>Giardia duodenalis</i>	>3 logs	Venlafaxine	86±7%
<i>Cryptosporidium parvum</i>	>3 logs	17-β-estradiol	*90%
Bacteriophage MS2 (virus surrogate)	>6 logs		

¹ Physiological/cellular effect of these compounds removed post AOS treatment

² Removal efficiency was at pilot scale, using a variety of different AOS reactor designs



Highest performance, lowest energy consumption

The AOS consumes approximately
0.04 watt hrs
per gallon.

How it works

The AOS utilizes an electrochemical advanced oxidative process (eAOP) that generates iodine and iodine oxides at its high-surface-area anodes. These molecules rapidly react with organisms and organic contaminants providing outsized treatment performance relative to electrical input.

The AOS has been vetted in multiple third-party studies. It has been shown to produce water that is environmentally safe and produces less disinfection by-products than common treatment technologies.

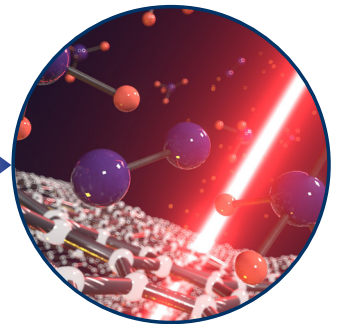
RAPID AND EFFECTIVE TREATMENT



The AOS



Spiral-Wound
Reactor



Iodine oxidizes

Total water treatment solutions

BioLargo offers full service environmental solutions. Our team of experts includes water and wastewater professionals, research scientists and engineers with 30+ years experience, who help ensure you receive the cutting-edge in water treatment. Our team solves the toughest environmental challenges to make your life better.

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