



UV Water Treatment  
**Atlantium Hydro-Optic™ Solutions**

**Beverage Industry**

# Disinfect Your Water with Light

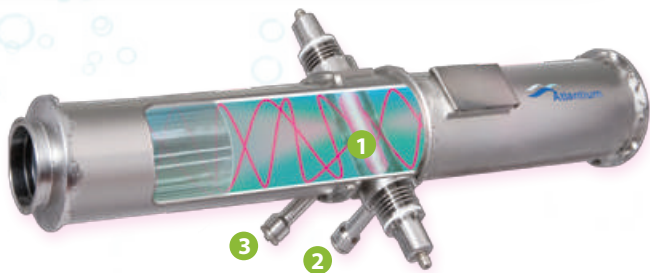


**Only Medium Pressure does more for less!**

# Safe & Sustainable

## Guaranteed Food Safety

Atlantium has accredited validation for 5-log microbial disinfection and 4-log Adenovirus using real Adenovirus, guaranteeing that your products meet the strictest regulatory criteria today and tomorrow. (Don't be fooled by unproven surrogates that regulators won't accredit.)



- 1 Medium Pressure High-Intensity UV lamp
- 2 UV lamp intensity sensor (per lamp)
- 3 UVT sensor (per lamp)

## Engineered for Efficiency

Atlantium's Hydro-Optic system is a green solution with no chemicals that delivers field-proven UV disinfection for beverage production applications. The system's unique technology recycles the UV light for optimized dose delivery and cost savings. Medium Pressure UV enables efficient cold (and hot) water use.



## Applications

### Chlorine Replacement

Atlantium's Medium Pressure high intensity UV combined with hydro-optic technology is a validated, credited system accepted by regulators as an alternative to chlorine for primary water disinfection. It is sustainable and cost-effective, and easily inactivates microorganisms, including chlorine-resistant pathogens, pseudomonas, cryptosporidium and giardia. It inactivates heat resistant spores too.

### Product Water Disinfection

Atlantium's system guarantees water safety without chemicals and disinfection by-products that need removal procedures. It has accredited validation for 4-log virus and 5-log microbial inactivation. There is no residual taste or odor that could affect product flavor.

### Post Active Carbon

Carbon is a breeding ground for bacteria and, without heavy maintenance, subject to costly breakthroughs. An Atlantium unit installed immediately after the carbon filter protects against breakthroughs and reduces contamination caused biofouling downstream, so demand for aggressive steaming is less frequent. Water, energy and production costs are reduced, providing a quick ROI.

### Membrane Protection

Atlantium's system inhibits biofilm growth on membranes, greatly extending membrane life and reducing the maintenance burden and operating costs. Membrane biofouling reduces production and increases the energy required to push the water through the membrane.

### Firewall

Municipal and even deep ground source water cannot guarantee water safety 24/7, and needs to be disinfected at the entrance to the plant to ensure product safety and prevent contaminated water from entering the production line.

### Ozone Destruction

Ozone is a strong oxidant that changes the flavor profile of bottled beverages and needs to be removed. The Atlantium system is an efficient, cost-effective solution for Ozone destruction.

## Process Water Disinfection

Atlantium's Hydro-Optic system enables high microbial inactivation without chemicals, for use in rinse and CIP applications. It achieves high log reductions and is particularly effective against biofouling-causing bacteria such as pseudomonas, that also happen to be highly resistant to chlorine.

## Dechlorination / Chlorine Destruction

Medium Pressure high-intensity UV light – brought to its full potential through fiber-optic technology – enables easy and efficient Dechlorination. The Atlantium system reduces Free Available-Chlorine (FAC) and Chloramines in beverage production lines to undetectable levels. It provides a clean, safe alternative to activated carbon filter or sodium bisulfite, with no chemicals, reduced risk, better protection and lower operating expenses.

## Pasteurized-Equivalent Water

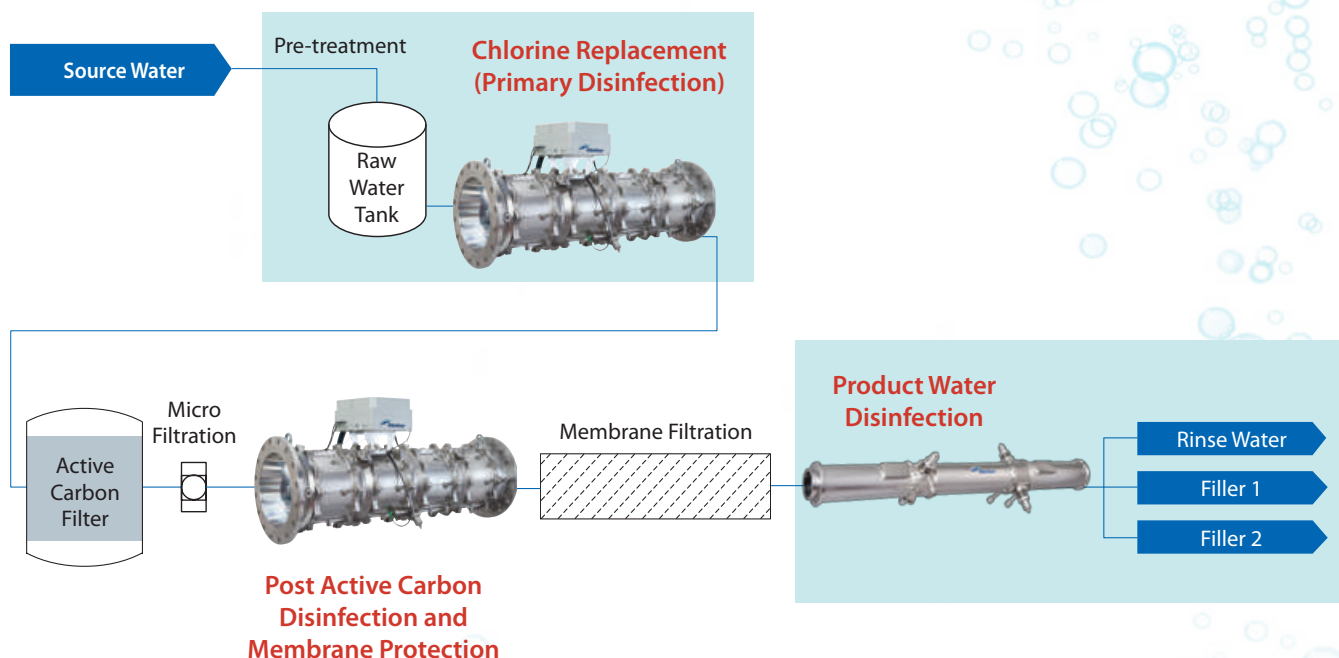
Atlantium's Hydro-Optic solution meets FDA criteria for pasteurized-equivalent water, opening the door to a sustainable alternative to heat - with cost-saving, time-saving pasteurized equivalent water on-demand. The Atlantium system is verified for compliance by third party validation.

## Quick ROI

At a leading beverage bottling plant, Atlantium installed a 2-lamp Medium Pressure Hydro-Optic system to replace an 18-lamp Low Pressure system, reducing UV lamp expenses and maintenance. Atlantium's system also reduced steaming frequency, resulting in less energy and water consumption. The plant achieved ROI within one year.



## Typical Beverage Installation



# Fiber Optic Technology Recycles UV Light

## Facts about Atlantium Medium Pressure Hydro-Optic Solutions

- 4-log Adenovirus credit
- Medium Pressure broad-spectrum UV for permanent microbial inactivation
- Green solution: high-grade water disinfection without chemicals and no disinfection by-products
- Sustainable substitute for chlorine
- Won't lose effectiveness with cold water and hot is fine too
- User-friendly integration with plant controls
- Integrated software for customized control and real-time monitoring
- True inline system with small footprint



## Easy to Integrate Easy to Use Easy to Maintain

### Automated UVT Monitoring & Dose Control

- Continuous real-time documentation
- The system self-adjusts and maintains the required dose even when critical parameters fluctuate

### Continuous Documentation & Traceability

- Continuous real-time documentation verifies disinfection levels for QA and Food Safety regulations
- Data logging system tracks all key data

### Minimum Down Time

- 4-minute lamp replacement
- Thick quartz tube protects the lamp and avoids broken glass and mercury in the water disinfection chamber

### Easily Integrates with Plant Controls

- True in-line system
- User-friendly customized integration with facility processes
- Option for integrated remote monitoring

## About Atlantium

Atlantium Technologies Ltd., founded in 2003, provides water-dependent industries such as dairy, food & beverage, pharmaceutical and aquaculture, as well as municipalities, with UV (ultraviolet) based treatment to meet the growing need for safe water.

The company's cost-effective and environmentally-friendly Hydro-Optic™ solutions deliver unprecedented microbial inactivation, taking water safety to levels never before achieved with other UV systems.

Atlantium's Hydro-Optic system is field proven and validated to the highest regulatory standards including EPA, FDA and PMO. The company has an international customer base with installations all over the world.



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For more information, please contact your Atlantium representative

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