

UV Water Treatment
Atlantium Hydro-Optic™ Solutions

**Bottled Water Industry** 



## **Next-Generation UV Water Disinfection**

## **Real 4-Log Adenovirus Validation Guarantees Food Safety**

Atlantium has third party validation to EPA credit for 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.)



### **Chosen by Leading Spring-Water Bottlers**

We have a long history in our company of maintaining treatment systems and production methods that are at the cutting edge of our industry.

For that reason, Roaring Spring has partnered with Atlantium Technologies to help us meet the new 4-log standard of EPA.

This treatment system is automated and will not allow any water out into our distribution system that does not meet the standard, and we're very proud to be a partner with Atlantium Technologies.

Scott Hoover, General Manager, Roaring Spring Water; President IBWA.

# Facts about Atlantium Medium Pressure Hydro-Optic Solutions

- Fiber Optic technology recycles UV light/energy
- Proven validated uniform dose delivery
- Medium Pressure broad-spectrum UV won't allow micro-repair
- Green solution: high-grade water disinfection without chemicals and no disinfection by-products
- Sustainable substitute for chlorine and ozone
- 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

### Permanent Microbial Inactivation

Medium Pressure UV permanently inactivates microorganisms and destroys their repair mechanisms, guaranteeing that there is no microbial repair further down the line.

Atlantium's patented energy recycling technology means that fewer UV lamps are needed to achieve full virus protection.

For example, at a leading beverage bottling plant an Atlantium 2-lamp Hydro-Optic system replaced an 18-lamp Low Pressure system.



## **Protects Your Brand while Reducing Costs**

Atlantium's Hydro-Optic system is a green solution with no chemicals that delivers field-proven UV disinfection for water bottling production. The system's unique technology recycles the UV light for optimized dose delivery and cost savings.

#### **Water Bottling Applications:**

# Replaces Chlorine and Ozone as Primary Product Water Disinfection

Atlantium's system is a sustainable alternative to chlorine and ozone disinfection. With accredited validation for 4-log Adenovirus and 5-log microbial inactivation, it easily inactivates microorganisms including chlorine resistant viruses, pseudomonas, cryptosporidium and giardia, as well as algae.

Atlantium's UV eradicates the threat of by-products that need additional cleaning and could result in product recall.

And water mineral balance & flavor profile are unaffected.

#### **Algae Inactivation**

Atlantium's system has **field-proven experience** treating water contaminated with algae, ensuring that bottled water remains clear and won't turn green from algae contamination, ensuring a much longer shelf life.

#### **Firewall**

Municipal and even deep ground source water cannot guarantee water safety 24/7, and needs to be disinfected to ensure product safety. Atlantium easily **inactivates even highly resistant microorganisms** including chlorine-resistant viruses, pseudomonas, cryptosporidium and giardia.

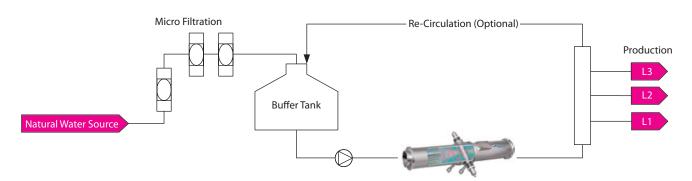
#### **Membrane Protection**

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

#### **Ozone/Chlorine Destruction**

Ozone is a strong oxidant that changes the flavor profile over time. Chlorine damages membranes and needs to be removed prior to the RO membrane. Atlantium's system is an efficient and cost-effective solution for ozone and chlorine destruction.

#### **Typical Bottled Water Installation**



## Easy to Integrate, Easy to Use, Easy to Mantain

Fully automated and engineered for maximum efficiency, Atlantium's award-winning solution has integrated user-friendly software that meets EPA criteria, for real-time monitoring and control - so you know you're actually getting the dose you need - all the time.



The monitor displays the status of real-time data, including actual dose delivered.

#### **Maximized UV Efficiency**

Atlantium patented Hydro-Optic UV technology uses polychromatic medium pressure UV light that leverages the entire UV germicidal spectrum to inactivate and destroy microorganisms. Fiber optics combined with hydraulics optimize UV energy efficiency, enabling uniform UV dose distribution for completely safe water.

#### **Fully Automated Dose Control**

- Continuous real-time documentation
- The system self-adjusts and maintains the required dose 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 food & beverage, dairy, 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 $^{\text{TM}}$  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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