

What if you could pasteurize water with light?

Atlantium's Hydro-Optic™ system for UV water treatment complies with the FDA's Pasteurized Milk Ordinance governing pasteurization and disinfection for the dairy industry.

Now you can!

Now you can have pasteurized water on demand. **It doesn't get more simple and economical than this.**

Sustainable Solution

Atlantium's UV system is extremely cost efficient as a water pasteurization replacement and **provides a quick ROI.**

"We recouped our initial investment the year of implementation, with subsequent annual net savings of over \$71,000."

Quote from one of our customers, a large US plant manufacturing dairy products, ice creams and juices, who saved on annual operating expenses:

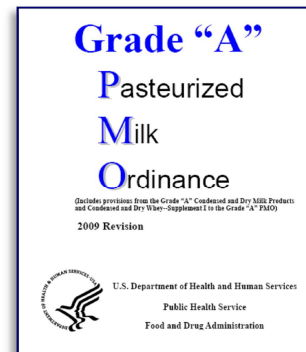
- **Electric Consumption down by 158,000Kw**
- **Personnel Time down by \$23,250 per year**
- **CIP for Tanks & Allergens down by \$13,000**
- **Down-Time down by \$19,200**

Compliance Reports at the Touch of a Button

A monitor shows the actual UV dose delivery in real time, as well as all mission-critical parameters from real-time sensor readings of water UV transmittance, UV intensity, lamp status and flow rate. There is an integrated customizable alert and alarm system, and water diversion signal as well as data log files for regulatory inspection. Appendix H compliant, too. **No stress, no added time.**

How Atlantium Complies with PMO 2009 Criteria

To market in the US, dairies need to use UV systems that comply with PMO 2009 criteria. Atlantium's system meets them all, and has been validated for PMO Appendix H compliance as well as government protocols and regulations.



PMO 2009 provides for the use of UV to disinfect water and to replace water heat pasteurization on condition that the UV system meets specific criteria.

No Risks of Contamination

With an Atlantium system installed you don't risk contamination or leaking from heating plates into the product water. There are **no chemicals that could affect the water chemistry or your products' flavors.**

Your Product is Safe

A computerized control system assures the delivered dose and **prevents untreated water from entering production.**



PMO 2009 Requires	Atlantium UV Provides
<p>1 UV light shall be applied so that the entire volume of water receives at least the following dose when used as pasteurized water: Low pressure UV at 2,537 Angstrom at 186,000 microwatt-seconds per square centimeter or a 4 log adenovirus equivalent. Medium pressure UV at 120,000 microwatt-seconds per square centimeter or a 4 log adenovirus equivalent.</p>	<p>Atlantium provides the minimum dose, not an average dose. Shows the actual dose number, not a sensor reading.</p> <p>Medium Pressure systems are more effective against viruses and microbial repair at lower doses. Atlantium's system software automatically sets the dose at 120 mJ minimum for pasteurized equivalent water.</p>
<p>2 A flow or time delay mechanism shall be provided so that all water moving past the flow stop or divert valve receives the minimum dose required.</p>	<p>Atlantium's monitor shows the actual dose delivered in real time, validating that the minimum dose has been achieved. Integrated software enables this function to work in conjunction with a divert valve, and a special utility enabling periodic testing to assure compliance.</p>
<p>3 The unit shall be designed to permit the frequent cleaning of the system without disassembly of the unit and shall be cleaned often enough to ensure that the system will provide the required dose at all times.</p>	<p>The Atlantium unit can be cleaned with the press of a button, or according to a pre-set schedule using Atlantium's optional proprietary ultrasonic cleaning technology, or in a closed loop system (without disassembling), depending on the water quality.</p>
<p>4 An accurately calibrated ultraviolet UV intensity sensor, properly filtered to restrict its sensitivity to the 2,500-2,800 Angstrom germicidal spectrum, shall measure the UV energy from the lamps.</p>	<p>The Atlantium unit provides a germicidal sensor that is properly calibrated; it also provides automated calibration routines to assure an accurately calibrated sensor at all times, and calibration verification reporting.</p>
<p>5 There shall be one sensor for each UV lamp.</p>	<p>The Atlantium unit is equipped with two sensors per lamp – one to measure the UV output, and one to analyze the UVT and automatically adjust the lamp to achieve the required minimum dose.</p>
<p>6 The light shall adjust based on water quality measured with a real time UVT analyzer to assure that the dose is always calculated accurately and provided reliably.</p>	<p>The Atlantium unit provides an integrated real time UVT analyzer that automatically adjusts the lamp output to maintain the correct dose.</p>
<p>7 A flow diversion valve or automatic shut-off valve shall be installed which will permit flow into the pasteurized product lines only when at least the required UV dosage is applied. When power is not being supplied to the unit, the valve should be in a closed (fail-safe) position which prevents the flow of water into the pasteurized product lines.</p>	<p>Atlantium's system integrated software allows the user to set this up easily and reliably. Low Flow and Shutdown modes let the user pick which is most appropriate for their operation, and comply either way.</p>
<p>8 The materials of construction shall not impart toxic materials into the water either as a result of the presence of toxic constituents in materials of construction or as a result of physical or chemical changes resulting from exposure to ultraviolet UV energy.</p>	<p>In Atlantium systems, all materials used are non-toxic and food-grade, and impervious to UV exposure.</p>
<p>9 The unit shall record the operating parameters (flow, UVT and dose) on a real time basis. These records shall be accessible to the Regulatory Agency for inspection.</p>	<p>The Atlantium system records and monitors water flow, UVT and UV dose on a real time basis. The software has database and storage utilities to facilitate regulatory inspection and keep records accessible, and summary one page reports to make inspections worry-free.</p>
<p>10 Electronically generated records, if used, shall meet the criteria specified in Appendix H.</p>	<p>Atlantium's software system complies with all criteria, including WORM, security and password protection, version & settings logging, backup & storage requirements and polling frequencies.</p>

For more information, please contact your Atlantium representative.

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