

Atlantium Technologies

Delivering Consistently High-Quality Disinfection for Enhanced Production

June 26, 2022

More than 3,500 installations, 700 customers in more than 65 countries working under strictest regulations



Complying with the most stringent validation protocols and approvals



Serving the Food & Beverage Industry Globally

CSD



Dairies



Bottled Water



The Healthy Hydration Company™



Juices



Breweries



Food



Unilever



CARBERY

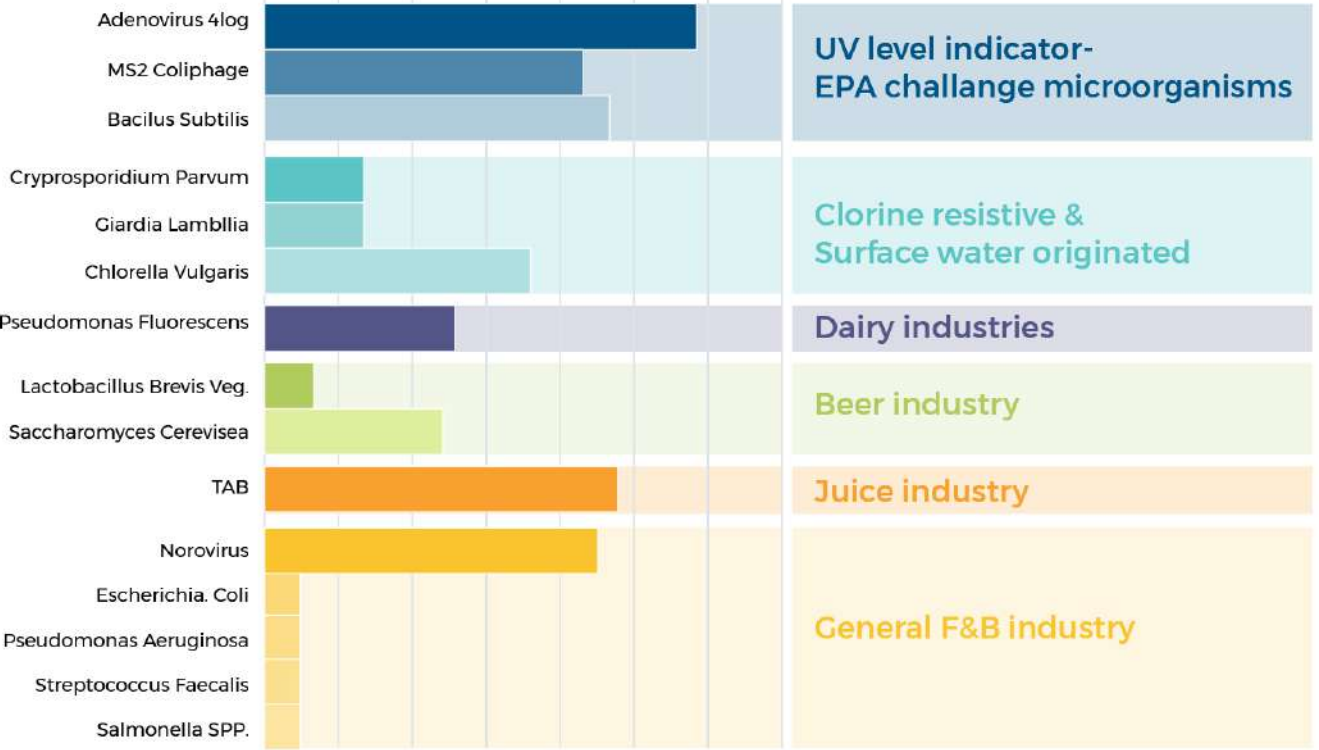


Global Company. Local Knowledge.

Vast Experience with Industry-Related Microorganisms

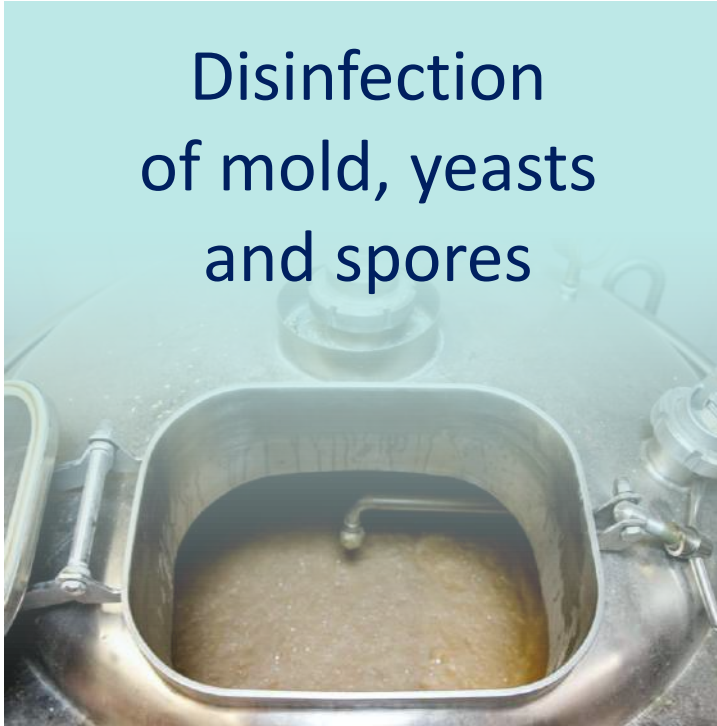
UV dose (mJ/cm²)

0 20 40 60 80 100 120 140



Syrup Application – General description

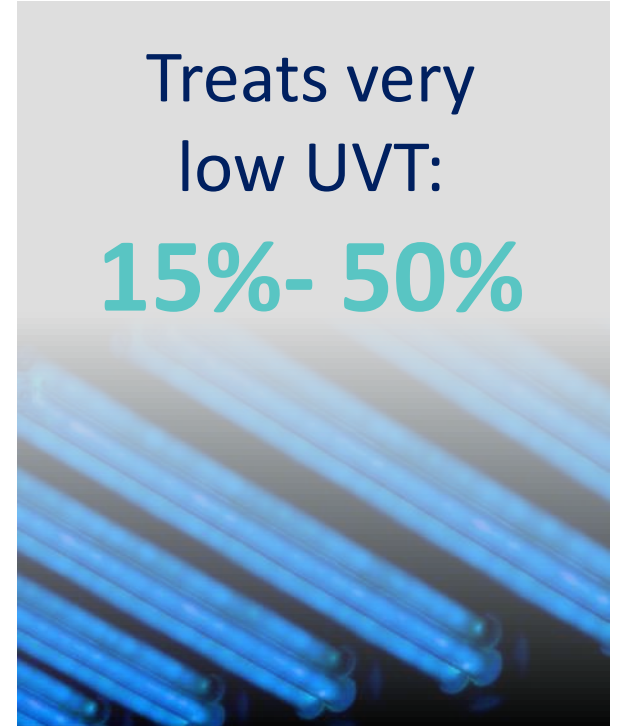
Disinfection
of mold, yeasts
and spores



Utilizing liquid sugar
between
60°Brix and **67°Brix**



Treats very
low UVT:
15%- 50%



Why Atlantium?

Special lamps delivering the **exact dose**, eliminating changes in taste and odor

Special designed chamber for low UVT to allow developed flow around lamps with out over heating and still **receiving the minimum dose required**

Thin film design of lamps in chamber to ensure **100% disinfection**

The only supplier with a **designated proven solution** to **eliminate spores** and reach Log 6 reduction!



Simple Syrup Disinfection

Copenhagen , Denmark
Simple Syrup

Challenge

Simple syrup is highly susceptible to contamination and impossible to use chemicals for disinfection



Outcome

A simple yet powerful solution to TAB and microorganism proliferation.



Simple Syrup Disinfection

Taiwan,
Simple Syrup

Challenge

On-site Log Reduction Value (LRV) under changing flow conditions
65brix syrup
Spores final concentration of 10⁵ cfu/L
Client suffers from severe microbiological issues



Outcome

>5 LRV (much higher than the industry standard of LRV 3)
Client achieved production stability without any operational challenges



Log Reduction Value (LRV) Testing



Set up:

- 65brix syrup
- Spores final concentration of 105 cfu/L



Results and Conclusions:

Item	Untreated spore conc.	Treated spore conc.	Rating	LRV	Flow rate
1	2.0x10 ⁶ cfu/L	<1 cfu/L	99.9999%	Log 6	12CMH
2	2.4x10 ⁶ cfu/L	<1 cfu/L	99.9999%	Log 6	12CMH
3*	2.4x10 ⁶ cfu/L	3.5x10 ² cfu/L	99.985%	Log 3.84	13CMH
	(-----)				

Conclusion: UV system may give a disinfection of ≥5 LRV.
Complies the acceptance terms of a LRV >4 disinfection ability.

[*] Item 3 is affected by sudden flow speed change (12CMH→15CMH→ stable 13CMH). This may affect some UV system outcomes. Despite of unexpected flow change, Atlantium UV system always give a result better than F&B market standard of LRV=3. There will not be sudden change in actual operation at the factory site. This influence is neglectable.