

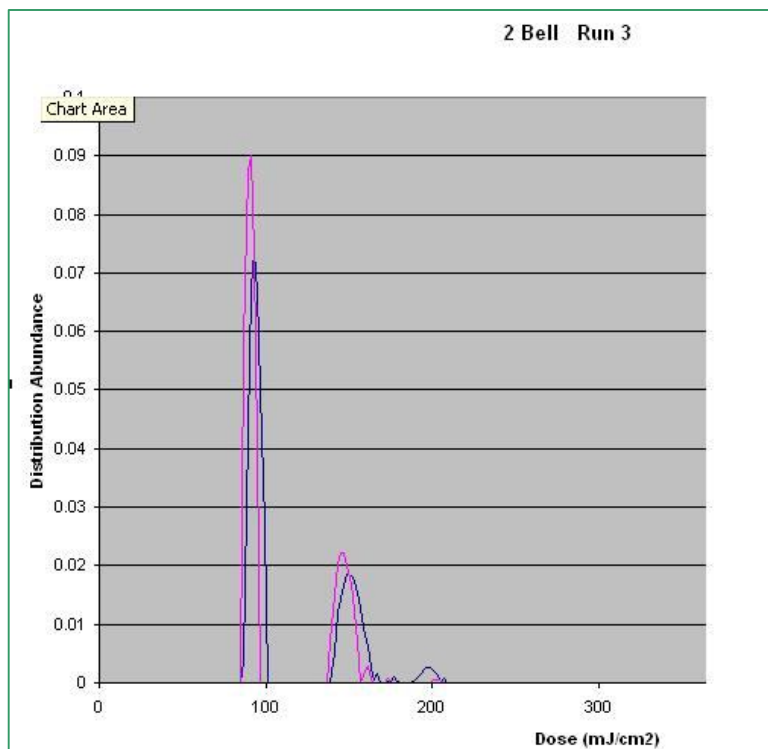


Atlantium Hydro-Optic Disinfection™ system uniform dose distribution

Atlantium was one of the leading companies selected to participate in a NYSERDA and AwwaRF sponsored research study that sought to find a way to characterize the real dose delivery of reactor with *dyed microspheres* (DMS)* to measure dose distribution. DMS demonstrates more accurately how effective a UV system actually is than a one-time test like Biodosimetry which is dependent on a specific microbe's behavior in a particular water matrix. The study was carried out in 2007 by HydroQual Inc and Purdue University.

The Atlantium system is designed and configured so that UV light will be uniformly distributed, with nothing in the water to block the disinfection and total internal reflection to maximize the light paths. This, together with consistently high disinfection performance in actual installations suggested a uniform dose. However, the experiments provide scientific measurement of the actual dose distribution characteristics.

In extensive tests of both Atlantium single and double bell configurations, HydroQual measured a highly uniform dose distribution, seen below.



- No low dose tracks – sharp definition of the dose
- Positive correlation for two runs under the same conditions
- Correlates with microbiological results
- Dose vs. dose distribution: one time vs. characterization

* Microspheres mimic the behavior of microorganisms. Dye added to the microspheres make it possible to measure the UV dose delivered to each one. The system allows researchers to make quantitative and accurate statements about the dose distribution delivered by a UV reactor.