



Biofilm in Recreational Water

What is lurking within the plumbing and jets in ALL Hot Tubs and Jetted Baths

Our Product



What exactly is Biofilm?

- Where there is water, there is biofilm (plaque).
- Biofilm consist of colonies of bacteria and other microorganisms that secrete a slime protective coating which make it difficult to fully eradicate by conventional sanitizers. Biofilms are generally pathogenic (disease carrying).



How Bad can they be?

- Biofilms in hot tubs have actually contributed to many deaths over the years. A Netherlands Flower Show in 1999 killed 32 people from Legionella. 230 more were very ill. Simply walking by 2 hot tubs with the infected mist was proven to be the source. Many people have still not recovered fully from this outbreak and is still being settled in court.

Protocols for Protection

- Maintain sufficient sanitizer at all times
- Adjust pH and other chemistry to proper levels
- Shower before Soaking (Yeah Right)
- **FLUSH** the **HOT TUB** **REGULARLY** with a product that has been tested and proven to chemically scrub and dislodge detritus materials, organics, exfoliated skin, lotion and cosmetic and soap build-up.

Popular Flush “PURGE” Products

- Natural Chemistry Spa Purge (Enzymatic)
- Silk Balance Clean Start (Borate-Borax)
- SwirlAway- (TSP, Surfactant, Sodium Bicarb)
- Whirlout (Sodium Metasilicate)
- AquaFinesse Spa Out (Sodium Metasilicate)
- Sea Klear Spa System Flush (Coconut Oil-Chitin)
- AHH-SOME (Surfactant/Nano-Scrubbers)

Test Data from CBE

- Center for Biofilm Engineering (CBE) is the Gold Standard for biofilm eradication efficacy. EPA, NSF, Clorox, J& J and 100's of other large companies contract with them for testing.
- Ahh-Some went to them as well
- Expensive but worth it because of the undisputed results. Only AquaFinesse did testing with them also and they hid their results.

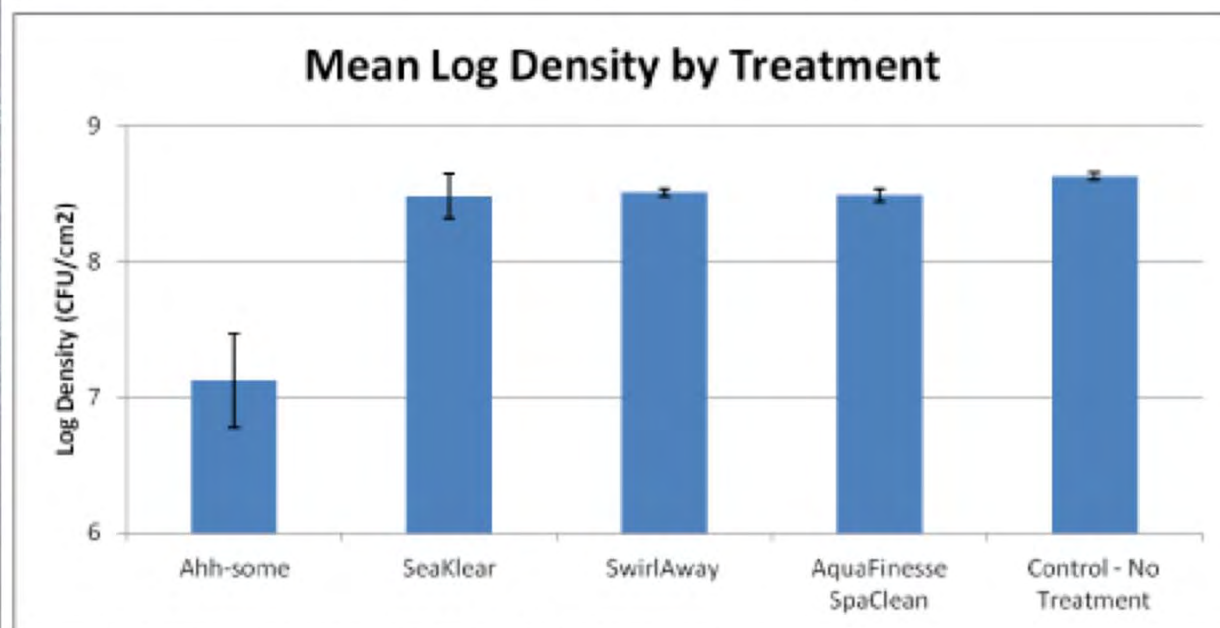


Figure 1. Mean log density of viable cells by treatment.

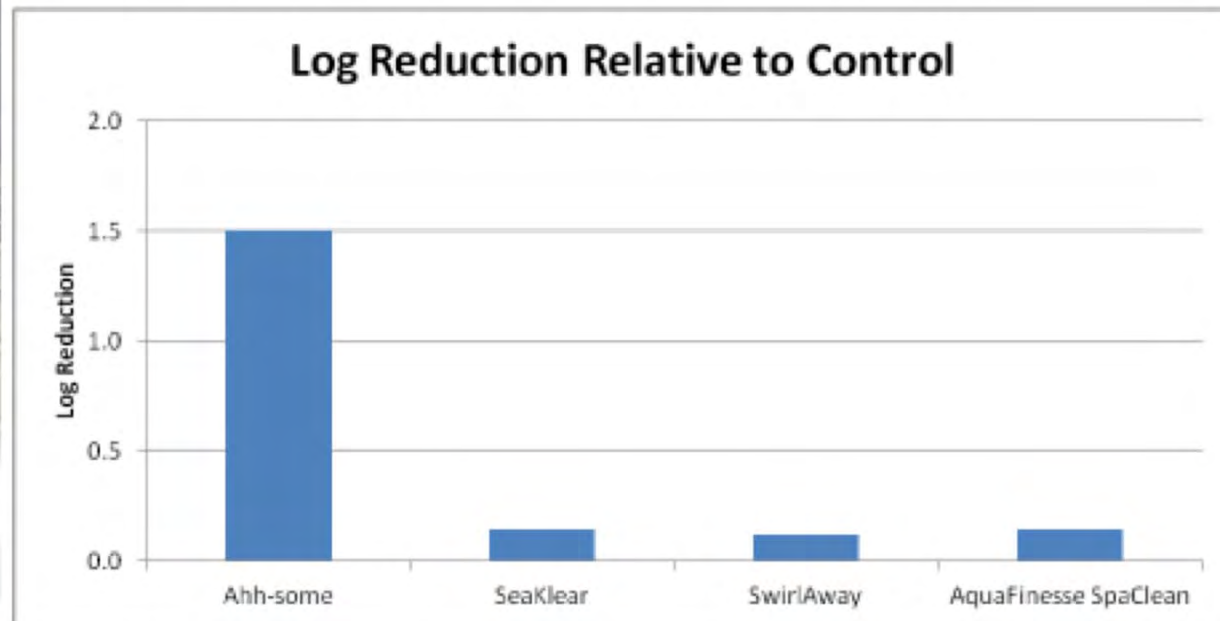


Figure 2. Mean log reduction of viable cells for each treatment relative to the untreated control.

Results

The mean log density of viable organisms enumerated from coupons following treatment is shown in Table 1. Also shown is the standard deviation of the measurement and the log reduction that each treatment resulted in relative to the control coupons. This information is also shown graphically in Figures 1 and 2. The 4 treatments tested ranged in efficacy from a 1.5 log reduction for Ahh-some to 0.12 LR for SwirlAway, the least effective treatment in biofilm viable cell reduction.

How did Ahh-Some Do?

- Out of the brands tested Ahh-Some came in FIRST. (Results handed out separately)
- Proven to be 5,000 times more effective than Natural Chemistry Spa Purge.
- 99.88-99.97% Effective in eliminating Pseudomonas Aeruginosa (Results Available)
- Swirlaway performed the WORST
- AquaFinesse was second to last in test results

Amount Used for Testing

- The amount of Ahh-Some used in the test(s) was $1/25^{\text{th}}$ of the amount used with other products. One 2 ounce Ahh-Some is enough gel to “Purge” the average Hot Tub 3 to 4 times. One 2 ounce Ahh-Some will do what 4-5 bottles of competitive products will try to do, and actually do the job. Typically, the \$39.95 Ahh-Some jar equals over \$100.00 of competitive product needed which still doesn’t clean and purge near as well. (See CBE Results)

Ahh-Some Advantages

- The “Purge on Steroids”
- Fast and Easy to use. Works within minutes
- Dislodges cytoplasm interior of biofilm matrix
- Assisted by water flow to flush more effectively because of surfactant penetration and softening of outer layers so deeper penetration of nano needles (NN’s) can puncture and disrupt their colony. We expose most or all of the slime layers in the system.

Ongoing Advantages

- Once the “Purge” is complete be sure to drain, rinse, wipe and eliminate all or most of the sticky residue (polysaccharides) or sugar molecules the Ahh-Some purged.
- Refill tub, add sanitizer, adjust water parameters into balance and power on.
- Sanitizer requirements will tend to be reduced since the enemy, biofilm in the plumbing is not exacting the same toll as before. Levels will stay in balance longer using less of everything.

MORE

- Water will LOOK AMAZING. Water will NOT SMELL. Water will FEEL SOFTER. Water will be so Clear you'll think it is in "HD". Retail store filled tubs will not offend even hypersensitive prospects. That overall chlorine smell will be mitigated or gone entirely. Employees will breathe easier and be working in a healthier environment. Customers will begin to come in and tell you that their maintenance has gotten much easier and the water quality better. **Wives will actually begin to go back into the hot tub.**

How to sell the Product

- Go to your customer and explain that you are now carrying Ahh-Some. Would they want to have happier hot tub owners coming into their store? Would they want to sell more hot tubs? Would they want existing customers telling friends and neighbors how easy it is to maintain and enjoy? Of course they would! Ahh-Some will help build their business. **They should tell customers about Biofilm and not keep it a secret.** Customers will appreciate their honesty and concern. We have seen this for ourselves. Every single brand new hot tub leaving any hot tub factory has biofilm issues. Every single hot tub should be Ahhsomized before they deliver the tub to their consumer. Start fresh!
- So, here's what you offer. Take any filled hot tub in the store or at their own personal tub. Purge the tub with the brand they currently offer. Refill the tub and use the Ahh-Some just minutes later.
- You will now have a motivated customer for life when they see what Ahh-Some did, what theirs didn't.