

Advantages of DPA System over Ozone

Greater Bacteria Reduction. Higher Dissolved Oxygen Levels

Determining the Relative Effectiveness of DPA System

In collaboration with a Singapore exporter of ornamental fish, SIF Technologies conducted a test trial to determine the relative effectiveness of DPA water treatment system against 2 identical Ozone water treatment systems.

Previously, the fish farm was using conventional filtration method. Subsequently, they switched to using 2 Ozone water treatment systems to treat water stored in the containment area before channeling the water for quarantine and farming purposes. 1 ozone system treats water at a rate of 10 tons per hour.

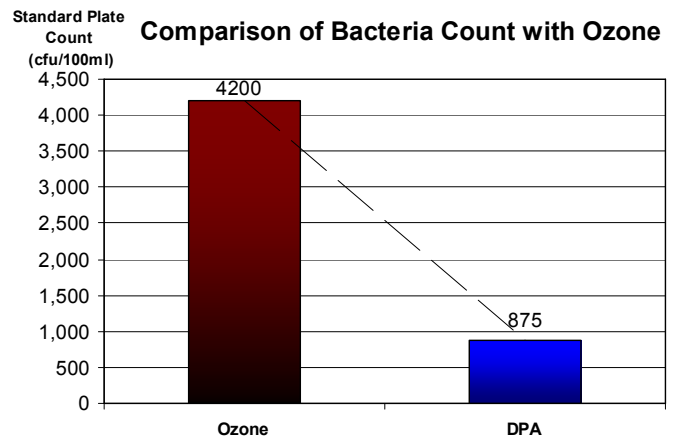
Testing Parameters of the Trial

The testing parameters of the test trial included total dissolved oxygen levels and saturation of total dissolved oxygen measured using a Hanna HI 9145 and standard plate count of anaerobic bacteria measured by membrane filtration method using APHA 9215D.

Prior to using DPA system, the farm was treating water with 2 Ozoniser Ozonizers. Measurements of total dissolved oxygen, saturation of total dissolved oxygen and standard plate count of bacteria were found to be 4.88ppm, 65.9% 8.75×10^4 cfu/100ml respectively.

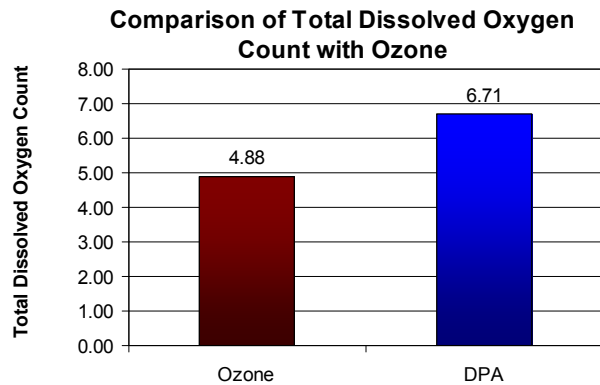
Greater Bacteria Reduction

Actual test results and readings showed that there was a steep decrease in bacteria count by approximately 92 % compared the ozone systems that was already employed in the farm.

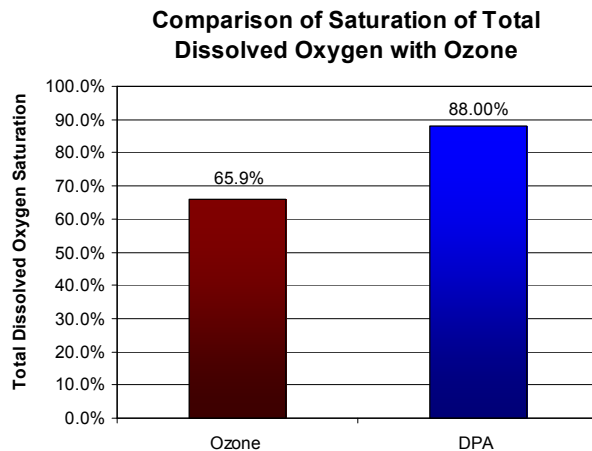


Creation of More Favourable Dissolved Oxygen Conditions

Results show a steep 40% increase in total dissolved oxygen count using the DPA water treatment system compared to Ozone.



There was significant 33% increase in saturation of total dissolved oxygen using the DPA Water Treatment System as compared to Ozone.



Potential Hazards of Ozone

*“It’s better not to stand too close to the Ozone as it’s not too good for health.” **

Managing Director of the Exporter

*Fewer by-products are formed by ozonation but the use of ozone produces a small amount of the suspected carcinogen Bromate which could potentially pose health risks to workers and personnel around the premise.