

GREEN POOLS & OZONATION

It is quite often that pool owners find their pools turn green. Though, 'green' denotes environmental friendliness, in swimming pools - it denotes an unhealthy pool! Most pool owners like their pools blue in color. Blue water denotes clean water, any other color has different meanings.

Why do pools turn green? Blue color of a swimming pool is due to a phenomenon called alkalinity balance. The alkalinity content of swimming pool water will make the pool look green. That is a slight imbalance in pH, and alkalinity of pool water will turn the pool green. This is what happens when there is a heavy down pour, when too much of top up water is filled in swimming pool or when pool is new and water is being filled for the first time. Green color of a pool can also be attributed to algal growth, but in this case, the green color will not be sudden, it will develop over two to three days to intense green. A lighter green color is mostly associated with pool imbalance.

Why do ozonated pools turn green sometimes? One advantage of using ozone in pool disinfectant process is that action of ozone is 'not dependant', neither on pH nor on alkalinity. This is a great advantage ozone has, over chlorine. But often, mistakes are made on sizing of ozone dose for pool water. In India, in absence of use of carbon filters in swimming pools (to remove excess ozone), technology providers design ozone system for a dose between 0.2-0.4 ppm of recirculation flow. However, often missed factors are bather load and quality of water available for pool use and pool operational timings.

In some pools, with an undersized ozone dose, either due to ignorance of the supplier or due to the ozone equipment not generating sufficient ozone as promised by the vendor, the pool water tends to turn green. This is because there is a sudden algal bloom, which means algae spores suddenly germinate all together and cause this green color. Why? The reason is insufficient ozone which often converts nutrients required for the algae to grow (apart from manufacturing their own chlorophyll) and are often converted by little

ozone to more assimilable nutrients, instead of destroying them totally. You can even have a sudden increase in bacteria count because of this. So, ozone promotes growth instead of destroying growth (this property, we use in effluent treatment/ sewage treatment to promote bacteria growth).

How to Prevent Green Color Pools

- ▶▶ Keep the pH in control.
- ▶▶ Check alkalinity levels frequently, and balance the pool.
- ▶▶ Backwash sand filter regularly and check for efficiency (sand filters are expected to remove algal spores).
- ▶▶ When it rains heavily, you may contemplate a dose of alum/ lime addition for flocculation.
- ▶▶ When you see small spots of algae in the pool, scrub them off. In fact, regular scrubbing of pool surfaces will avoid algal bloom.
- ▶▶ Add top up water in balance tank preferably and not directly into pool.
- ▶▶ Ensure your ozone system is rightly sized and is in good working condition. Many times the client will not notice that his ozone system is not working. Try to get a regular service back-up of the ozone system.
- ▶▶ Some clients express that they want pool in natural green color, use green tiles to make it look greenish. But often this makes maintenance very difficult since you will not know if pool is imbalanced. In chlorinated pools, this imbalance can make chlorine ineffective and pool may not be disinfected - even if large amounts of chlorine is used.
- ▶▶ Do not stock liquid chlorine for more than 7-10 days, to ensure that the efficacy has not deteriorated.

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