

# Pool Water Testing

Many people think that if the water looks clear and blue, then it is free from bacteria and algae. But to fully ensure that pool water is free from bacteria and other contaminants, it needs to be tested at least once a week during the peak swimming season.

For those of you that have used conventional test kits with liquid solutions, we have a suggestion. Try test strips. They have improved over the years and are very simple to use. You simply dip the test strip into the pool water and compare the colors with the comparator on the side of the bottle. They are accurate and simple to use.

Proper water testing will help detect any problems that might be developing, which—when detected early—can be resolved easily so you can avoid headaches down the road. If you want to test your water yourself, here are some tips to help achieve accurate results:

- If using a conventional test kit, always start with a clean testing vial and fresh reagents. Test chambers should be rinsed with clean water after each use.
- Liquid reagents and test tablets should be replaced at the beginning of each swimming season. If using test strips, they have an expiration date on the bottom of the bottle.
- Check the free chlorine level. Generally, levels should be between 1.0 and 3.0ppm (parts per million).
- Check and adjust the total alkalinity (TA). TA is a measurement of the “buffer” capacity of your pool water, which prevents big changes in pH and helps avoid corrosion and staining. Total alkalinity at approximately 150ppm provides optimum performance.
- Test and adjust the pH. The correct range is 7.4 to 7.6. This is probably the most important test for your pool.

- Be sure you know the pool capacity in gallons for your pool. Chemically treating the improper gallonage can cause problems with your pool water.
- Every 2-3 months, bring a sample of your pool water (approximately one pint) to your local pool store for a free water analysis. We have pool owners that bring their water in on a weekly basis. Our water lab can test more and is more accurate than a conventional test kit. It can truly take the look of your pool water to another level.

You will generally only perform from two to three water tests on pool water, but there are actually about six tests, which you should at least be aware of.

1. Chlorine—ideal range 2-4
2. pH—ideal range 7.2-7.6
3. Total Alkalinity—ideal range 80-120
4. Cyanuric Acid—ideal range 30-100
5. Calcium Hardness—ideal range 200-400
6. Total Dissolved Solids—ideal range less than 1000
7. Metals—ideal range reading – 0

These ideal ranges are dependent and integrated on each other to achieve properly balanced water. For example, if you have your water analyzed at Gohlke Pools and your calcium hardness is 100, it will not have you raise it to the ideal range if other tests indicate that the water is not corrosive or scaling.

It is recommended that at least chlorine, pH, and total alkalinity tests be mastered by the pool owner. The other tests (cyanuric acid, calcium hardness, total dissolved solids, and metals) can be left up to Gohlke Pools.

## What is pH?

pH is a number that characterizes the acidic or basic characteristics of a substance. It is measured on a scale from 0-14, with 0 being

acidic and 14 being basic. pH actually stands for potential Hydrogen. Why is it important that we keep our pool pH in the range of 7.2 to 7.6?

This is the range where swimmers are comfortable, water remains clear, the pool equipment is not damaged, and the sanitizers (chlorine) work more efficiently. High pH can cause scale formation, cloudy water, eye & skin irritation, and poor sanitizer efficiency. Low pH can cause damage to pool surface (plaster, vinyl, & fiberglass), damage to equipment, eye & skin irritation, and unstable chlorine. pH can be lowered by adding muriatic acid and can be raised by adding pH Plus.

## What is Total Alkalinity?

Total Alkalinity is the measure of the ability of the water to resist pH change. In other words, if the total alkalinity of the water is kept within its ideal range, it acts as a buffer against changes in the pH. So if it rains heavily or swimmer load increases, the total alkalinity absorbs the shock of pH changing events and the pH isn't as likely to change. If the total alkalinity is low, the pH will bounce around dramatically, making it difficult to keep the water clear and comfortable. If the total alkalinity is high, the pH will also usually be high (and difficult to lower) and you face the problems of cloudy water, eye & skin irritation, scale formation, and poor sanitizer efficiency. Total alkalinity can be lowered by adding **muriatic acid** and can be raised by adding **Alkalinity Plus**.

*BE SURE TO READ ALL LABEL DIRECTIONS BEFORE ADDING ANY PRODUCT TO YOUR SWIMMING POOL.*

## Note:

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-Always follow label directions and manufacturer's instructions for each product used.

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