

Inground Pool Care

# Pool Water Chemistry 101: Testing & Balancing Your Pool Water

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The Pool Company

# Three Ways to Test Your Pool Water Chemistry

 **Frequency:** 2-3 times per week

## Method 1: Test Pool Water Chemistry Using Pool Test Strips

1. Hold the strip underwater for 2 to 3 seconds
2. Remove the testing strip from the water, be careful to keep the padded side facing up
3. Wait 15 seconds. Do not shake any excess water from the strip, as this may interfere with accurate results
4. Compare your strip against the label on the package until you find the closest match. You may need to adjust pH or other levels.



## Method 2: Test Pool Water Chemistry Using Pool Test Kits

1. Collect a water sample from at least 18" beneath the surface of your swimming pool
2. Measuring as precisely as possible, fill the test vials according to the kit's instructions. Be sure to rinse out each test cell with pool water before using
3. Add the correct amount of reagent to each tube, following the kit's directions carefully. You may need to gently shake the sample once it has been sealed shut
4. Compare the sample colors against the label on the testing kit, looking for the closest match



**Method 3:** Test Pool Water Chemistry Using Digital Pool Testers 

You can connect digital pool testers to smartphones or other devices, which offer convenience and detail.

- However, electronic testers tend to be more costly — and often, less accurate — than alternatives like kits and strips.
- Since digital testers vary widely in their quality and design, be sure to follow the app or device's instructions.

**WHAT'S THE BEST WAY TO TEST POOL WATER?**

Experts often recommend test strips for beginners, because they provide reliable results with minimal effort and cost. As you gain experience and become more comfortable with the water testing process, you'll likely develop a preference of your own.

# How to Balance Your Pool

 **Frequency:** As needed

- 1. Adjust Alkalinity:** A pool with **low alkalinity** has high acidity. If your swimming pool has alkaline levels below 80 ppm, it's at risk of corrosion and damage — and worse, it's unsafe for swimming. Fortunately, you can correct this problem by raising the alkalinity until it measures between 80 and 150 ppm, though some **experts recommend** a range of 80 to 120 ppm. To increase your swimming pool's alkalinity, simply add the recommended amount of diluted sodium bicarbonate (baking soda). To lower the alkalinity, add dry or muriatic acid.
- 2. Adjust pH Levels:** If the pH levels are too low, the lining of your pool can become damaged, brittle, or stained. On the other hand, pH levels that are too high can cause cloudy water — and **painful skin rashes**. To avoid these issues, you need to balance your pool's pH levels. You can raise your pool's pH level by adding soda ash to the water. To lower your pool's pH level, carefully add dry or muriatic acid while wearing protective gear over your eyes and hands. The best pH **level for a pool** ranges from 7.4 to 7.6.
- 3. Balance Calcium Hardness:** Most experts recommend using a calcium hardness increaser, such as calcium chloride, if your water's calcium hardness levels fall below 200 or 150 ppm. If calcium hardness levels exceed 400 ppm, you can solve the problem by partially or completely draining and refilling the water. Anywhere from 200 ppm to 300 ppm is a good range to aim for.

4. **Sanitize:** You can sanitize pool water with chlorine tablets, liquid or powdered chlorine, or even a salt chlorine generator. If the contamination is severe, you may need to shock the pool, which we'll describe a little later. Ultimately, you are aiming for chlorine levels of 1 to 3 ppm, per current **CDC recommendations**.
  
5. **Measure Cyanuric Acid (CYA) Levels:** CYA is a stabilizer that gets added to certain pool shocking chemicals, such as di-chlor. Its purpose is to prevent ultraviolet (UV) rays from burning off free chlorine, making sanitization more efficient — especially on hot, sunny days. The ideal CYA measurement for your swimming pool is between 35 and 60 ppm, unless you have a saltwater pool. In that case, aim for 60 to 80 ppm.



## ALTERNATIVES FOR THE CHLORINE TABLET SHORTAGE

Rather than purchase chlorine from a store and transport it home, you might consider making chlorine right where you need it – in your pool. This works by simply adding a device called a salt chlorine generator (SCG).

Another easy way to beat the chlorine shortage is to keep your pool covered when it's not in use. Regularly covering your pool with an automatic safety cover can reduce chemical use by up to 70%. Autocovers also can help reduce evaporation by 90%, meaning more sanitized water stays in your pool.

[Learn More](#)

- 6. Measure Dissolved Solids:** Total dissolved solids, or TDS, measures how many solids (such as grime, salt, or algaecide) have dissolved in your pool water. Most **experts recommend** keeping your TDS levels below 1,500 ppm, or even below 1,200 ppm. If the TDS level is too high, you will need to fully or partially drain and replace the water.
- 7. Shock the Pool:** Shocking your pool significantly increases the amount of free chlorine that's available to destroy bacteria, algae, and chloramines. A weekly or biweekly shock helps to keep the water sanitized. Again, the optimal level of free chlorine is 1 to 3 ppm.
- 8. Test the Water:** Check your work by retesting the water, ensuring that alkalinity, pH, calcium hardness, and other measurements are within the acceptable range.

## Professionals Are Here to Help

If any of these pool maintenance tasks seem a little too daunting, it is never a bad idea to call your trusted independent builder to provide these services for you.

[Speak to a Builder](#)