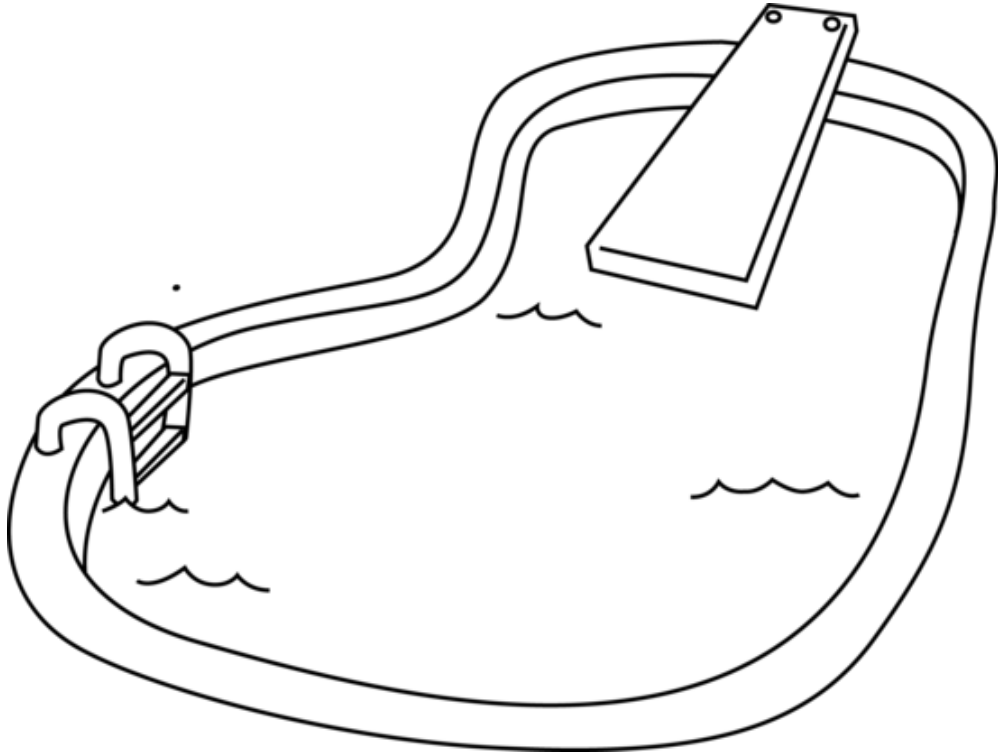
PRESTIGE POOLS & SPAS

Understanding Your Pool Chemicals

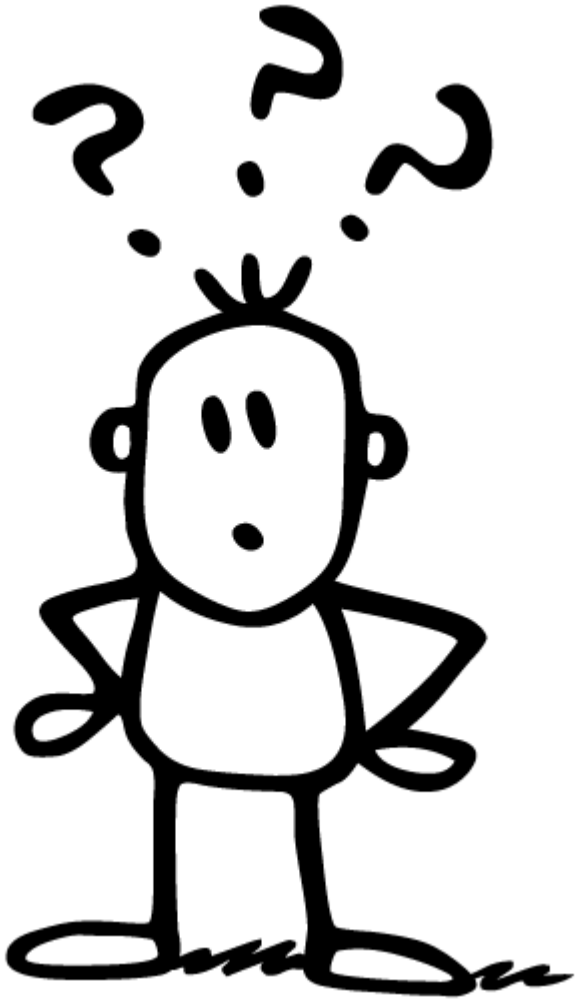


A Guide to Maintaining a Clean and Beautiful Swimming Pool.

(SALT SYSTEMS)

PRESTIGE POOLS AND SPAS • 10416 WATSON ROAD • ST. LOUIS MO 63127 314.821.6660 • FAX 314.821.6669 • www.prestigepoolsandspas.com

Water Chemistry- The "WHY?"



The goal of water chemistry is to protect swimmers, protect pool surfaces and equipment and to achieve clear water for aesthetic purposes. A clear pool does NOT equate to balanced (and safe) water. Thus, the better the pool water chemistry is maintained, the SAFER your pool is, the longer your equipment will last and the better your water will look.

All water chemistry levels are determined and approved by the Association of Pool and Spa Professionals (APSP) and by pool and equipment manufacturers. Prestige Pools and Spas adhere to these standards.

What Will You Be Testing For?

There are three levels that you will test for and evaluate on a regular basis: Sanitizer, pH and Alkalinity. Whether it is an in-ground pool, above ground pool, swim spa or spa, standard water chemistry always cover these three principles. Keeping these three levels in the preferred range goes a long way to achieving a safe and sanitary pool environment.

Basic Chemicals You Will Need

Chlorine Stabilizer
Solar Salt (Fine, PURE salt, NOT ROAD SALT!)
PH Rise/Minus
Alkalinity Rise/Minus

Ideal Readings for Your Water Levels

Chlorine	1.0 - 4.0 ppm
PH	7.4 - 7.8 (7.6 Ideal)
Alkalinity	80 -120ppm
Salt	2800 - 3500

Sanitizers

Almost everyone uses some form of sanitizer in their daily lives. We all know they are great at killing germs and bacteria. All pools/spas employ a sanitization system to kill harmful bacteria and maintain water clarity. Chlorine is the most common sanitizer used today in residential pools. Through the years, the industry has developed several ways to distribute chlorine: As a tablet, as a liquid, as a powder, and/or via the salt system which you have purchased.

Salt System: What It Does and How It Works

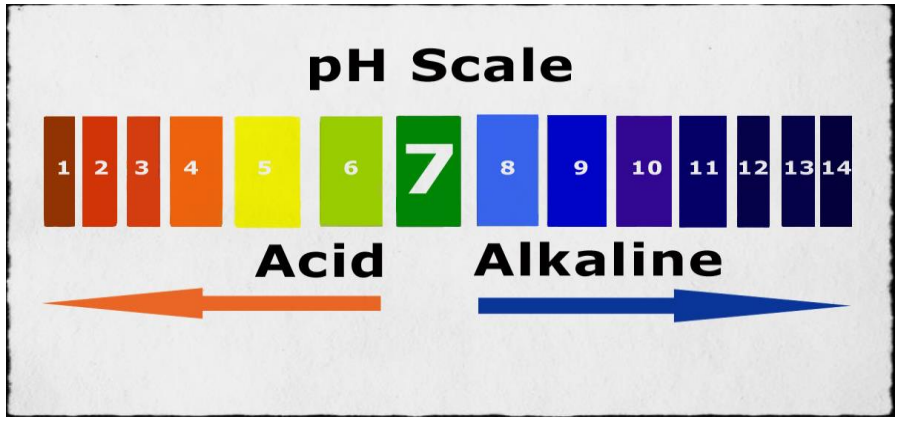
We Will go over this in our next presentation.

Why Is a Salt System Better?

Chlorine tablets are chemical compounds with calcium, sodium or lithium components mixed with stabilizing agents and other additives, salt systems generate a purer form of chlorine without the extra additives. In addition, salt systems generate and distribute chlorine in a more consistent manner than tablets.

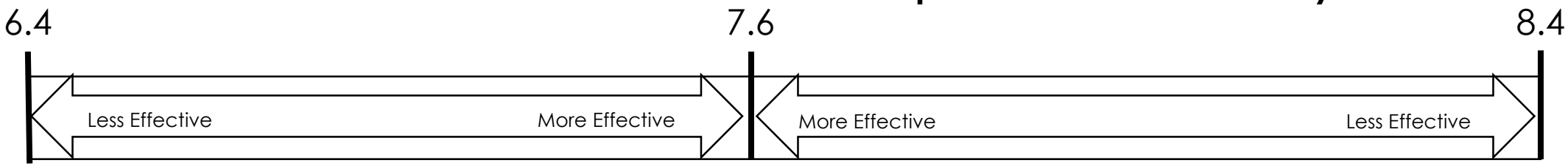
Adjusting chlorine output with your salt system is easily achieved by monitoring your salt systems' control board. This negates any touching of chlorine tablets and keeps you from inhaling potentially harmful fumes

pH



For your sanitizer to properly function it is imperative that your pH level remains balanced whenever possible. In nature, pH measures the acidity or basicity of a solution. In water chemistry for pools, the measurable range is 6.4 to 8.4.

NOTE: At a pH of 8.0 Chlorine is only 22% effective!



An ideal pH reading is 7.6, with a range of 7.2 to 7.8 being acceptable. When pH is balanced within this range, chemicals will work at its peak effectiveness. Lower pH levels may cause corrosion of your pool equipment, damage to your pool's finish and equipment (all of which is not covered under warranty), leaves metal deposits and can cause skin/eye irritation. High pH pulls metals from their sources and causes cloudy water. General imbalance on either end causes discoloration and loss of chlorine effectiveness.

Rains, topping off your pool and heavy bather loads are all actions that may cause your pH to fluctuate. pH is essential to your overall water chemistry: The more it is off, the more vulnerable your water is to bacterial/algae growth. Keep it within the ideal range at all times if possible.

Alkalinity

The alkalinity level, when balanced, acts as a buffer for your pH reading. For pools with a salt system, alkalinity levels should be kept between 80 to 120ppm. Elevated levels allow the metal components of your pool to become pitted, and pH levels to spike at a much faster rate. When levels are below ideal, metals will deposit upon pool surfaces, causing stains. General imbalance can cause the appearance of green or cloudy water while irritating swimmer's eyes.

Alkalinity and pH work hand and hand with each other. Generally, adjust alkalinity levels prior to addressing pH. As both are chemically similar, sometimes an adjustment to one level can partially or fully balance the other. Here is a chart to simplify the adjustment process:

IF PH & ALKALINITY ARE **BOTH HIGH** - ADJUST BOTH BY USING PH LOWER.
IF **PH IS HIGH** AND **ALKALINITY IS LOW** - ADJUST PH FIRST AND THEN ALKALINITY.
IF PH AND ALKALINITY ARE **BOTH LOW** - ADJUST ALKALINITY FIRST.
IF **PH IS LOW** AND **ALKALINITY IS HIGH** - ADJUST ALKALINITY FIRST AND THEN PH.

Superchlorinate

As the St. Louis metro area often sees great fluctuation in temperatures through the beginning of spring to the closing season in the fall, the need for chlorine can often increase and decrease. Temperatures (both air temp and water temp), sunlight, bather load size and frequency of usage, pools size and depth are all factors that may cause fluctuations in chlorine output and/or chlorine usage. We will talk more about this in the next presentation.

Stabilizer

Heat, U/V rays and general usage can accelerate chlorine loss. Stabilizer (Cyanuric Acid) prevents the loss of chlorine and extends the ability to kill bacteria and algae. Stabilizer is generally heavily applied at the beginning of the pool season, when a pool is drained and/or refilled, or whenever proper chlorine residual of at least 1.0 ppm cannot be maintained in a 24-hour period. Subsequent maintenance dosages may need to be applied throughout the season. Always test before adding stabilizer and check levels periodically. Maintain at least 80 ppm of stabilizer in your pool at all times.

IMPORTANT: Add stabilizer very slowly to skimmer and do not backwash for 24 hours.

The following chemicals are “helper” chemicals that play an important but minor roll in your pool water.

Stain & Scale / Stain X / Abscorb-X

These metal removers prevent copper and iron from leaving deposits on the pool surface and protect the pool surfaces and filter system/heating components. Copper is the element that will turn blond hair green and must be masked. All water should be checked periodically for metal readings. Treating your pool for stains might be something you will have to maintain on a weekly basis to keep stains from returning, especially if you have source water that is high in pH/alkalinity.

- Stain & Scale can be used for maintenance on a weekly basis and can remove trace amounts of metals.
- Stain-X is more concentrated and is more effective on severe stains.
- Abscorb-X instantly removes stains but does not remove metals. It should be followed up with a treatment dosage of Stain & Scale.

Majestic Blue/Pool First Aid Clarifiers

Cloudy water devoid of a greenish hue can indicate that the filter system is not grabbing the smaller particulate matter in your water. Majestic Blue will coagulate around the particles, making them larger and easier to filter. Use Pool First Aid for cases of extreme or severe cloudy water.

Algae

Algae are living airborne spores that multiply rapidly on warm, sunny days. It will also cloud and color the water. Algae spores constantly enter the pool, brought by wind, rain or even contaminated swimsuits or pool equipment/accessories. When conditions are right, an algae bloom can occur seemingly overnight. These conditions include: Imbalanced water, warmer temperatures, prolonged periods of direct sunlight and the presence of nitrates and/or carbon dioxide. A lack of proper circulation, filtration and sanitation may also be contributing to algae blooms. Persistent algae outbreaks can be treated with a weekly algaecide dosage and proper brushing of the entire pool surface.

Total Hardness

All water sources contain a certain amount of calcium and magnesium compounds. This is what we call the hardness level in the pool. Certain chemicals such as calcium hypochlorite can also add hardness to the pool. The current level should be between 100 to 400 ppm. Levels too high can cause cloudiness of scaling on the pool walls. Levels too low can cause etching of plaster pool finishes. To raise hardness, add hardness control accordingly. The only way to reduce hardness is dilution with fresh water (i.e.- drain the pool).

Test Regularly

Regular testing is the only reliable way to make sure water is chemically balanced. Use a quality test kit to monitor essentials such as Free Chlorine, Total Chlorine, Alkalinity, and pH. For accuracy, take a pool water sample about 18" below the surface, away from return jets and from several areas around your pool. Always use a clean container for collecting samples and test promptly for accuracy. Store test solutions in a cool dry place away from other chemicals and direct sunlight. It's recommended that you periodically take a sample to a pool professional for the most complete water analysis possible.

Keep Your Pool and Filter Clean

In season, your pool should be thoroughly cleaned on a regular basis. Your cleaning regimen should include the following:

- Skim Pool Surface
- Brush Walls and Floor
- Vacuum Pool (Do NOT vacuum in **BACKWASH** mode. Vacuum to **WASTE**).
- Clean out Skimmer Baskets
- Clean out Hair and Lint Basket (Attached to PUMP)
- Hose Down Pool Deck (Including spraying out the ladder cups)
- Maintain Filter System

Final Thoughts

Your swimming pool should be a source of relaxation and fun. Don't obsess over it. Allow your chemicals sufficient time to work. Test your water chemistry once every 3 or 4 days for best results all season long.

- Take your water to a pool professional once or twice every month for a complete and thorough water analysis.
- Have one day a week to pamper your pool. This encourages good habits to develop.
- If heavy rains, heavy bather loads or extreme temperatures are present, shock every 3 to 4 days.
- The appearance of clear water doesn't necessarily mean it is comfortable or sanitary to swim in. Maintaining your levels of alkalinity and pH are crucial: It not only prevents the need for excessive chemicals but will extend the life of your pool's components.

When In Doubt - Contact Us!

We offer **FREE** water analysis - bring us an 8oz. water sample (as fresh as possible) for complete analysis. Our experts are highly trained and have over 30 years of water chemistry experience. Email water chemistry questions to **water@prestigepoolsandspas.com**

Prestige Pools and Spas
10416 Watson Road
St. Louis, MO 63127
314.821.6660
prestigepoolsandspas.com