

Spa Total Alkalinity

Keeping the total alkalinity (TA) balanced helps maintain proper pH, prevents damage to equipment, especially the heater, keeps the water clear, and prevents scale buildup. In chlorinated or brominated spas, the alkalinity should be maintained from approximately 106 to 150 ppm. Levels above this will not necessarily cause problems, but other factors should be taken into account, such as the Calcium Hardness, average temperature, and pH. For SoftSoak spas, maintain the TA from 80 - 120 ppm. Perform a complete spa water analysis and follow ALEX instructions for TA adjustment. Total alkalinity is lowered by the use of Brominating Tablets and regular use of Spa Shock, so it is important to test it periodically and adjust as needed. Test total alkalinity at least once every three to four weeks, depending on the amount of use the spa is getting.

In spas using Spa Sentry, the total alkalinity still must be maintained. If the total alkalinity becomes too low, it can shorten the life of the Spa Sentry and the pH may fluctuate more frequently. For spas using Brominating Tablets with Spa Sentry, raise the total alkalinity to 200 ppm.

If the total alkalinity is high, use SpaGuard pH Decreaser to gradually lower it over a period of days. Make sure aeration is off when you are adding pH Decreaser.

If the total alkalinity is low, use SpaGuard Total Alkalinity Increaser according to label instructions or ALEX recommendations.

Spa pH Balancing

In a spa, pH is very important. Low pH can damage surfaces and equipment and can cause eye and skin irritation, while high pH can cause scale buildup and cloudy water. Proper pH balance is also necessary for the sanitizer to work the most efficiently. But, it is often difficult to maintain pH in the ideal 7.4 - 7.6 range. (Note: For SoftSoak spas, maintain pH from 7.2 - 7.6.)

Test the pH twice a week and adjust as needed.

High pH

Many things about a spa cause the pH to stay or appear high. pH is naturally raised by warm water (obviously common in spas), other products, foreign substances and bathers (also common in spas). Aeration is also a culprit - it releases carbon dioxide from the water, which in turn reduces the amount of carbonic acid present in the spa. This causes pH to increase. (To lessen the effects of pH drift, add chemical products with the aeration off.) Use Spa pH Decreaser to lower pH.

CAUTION: A common mistake that is made with pH in spas is to diagnose it as high when it is actually low. In brominated spas, the brominating product reacts with the phenol red reagent to make the pH reading look purple. This discoloration is exaggerated when the pH is already low. Use up to 5 drops of chlorine neutralizer to make sure that you are getting accurate pH readings when testing with phenol red.

Low pH

Low pH is usually attributable to low Total Alkalinity and/or use of Brominating tablets. (Note: BioGuard does not recommend the use of trichloro chlorinating tablets in spas because of the potential for surface damage.) Brominating tablets can cause the pH and the total alkalinity to drift down rapidly. If these products are being used, check pH frequently to avoid equipment damage. As indicated above, use up to 5 drops of chlorine neutralizer to make sure that you are getting an accurate pH reading if you are testing with phenol red. Use Spa pH Increaser to raise pH.

pH and Spa Sentry

Spa Sentry helps regulate pH. Spa pH adjusters can still be used with this product, but are not usually necessary. Spa Sentry employs a phosphate buffer which helps lock the pH in place and eliminate some of the normal fluctuation. Apply Spa Sentry according to ALEX instructions. It will cloud the water as it causes the calcium to precipitate. When Spa Sentry is used, pH still must still be checked and may need to be adjusted occasionally. Follow ALEX instructions for pH adjustment when using Spa Sentry.

Spa Sanitizer Residual Balancing

The proper sanitizer residual for your spa depends on what sanitizer type you are using and sometimes whether the spa is commercial or residential. Use the following guidelines for ideal levels for your spa.

Chlorinating Concentrate:

Ideal range 3-5 ppm.

When first starting a spa with Chlorinating Concentrate, test the free chlorine residual frequently to determine how often you will need to apply product. Add 2 tsp. of Chlorinating Concentrate per 200 gallons at a time with the pump running. Circulate 2 hours, then retest the free chlorine residual. Adjust as needed.

Brominating Tablets:

Residential 2-4 ppm.

Commercial 4-6 ppm.

When starting with a fresh fill, fill up the feeder or floater with Brominating Tablets according to manufacturer's instructions. Shock the spa using Chlorinating Concentrate or Brominating Concentrate according to label instructions to eliminate undesirable compounds and establish a sanitizer residual. Adjust the feed or flow rate for the Brominating Tablets and test frequently for the first week. Shock as needed until the proper bromine residual can be established and maintained for several days.

Brominating Concentrate:

All Spas 3-6 ppm.

When starting with a fresh fill, add 2 tsp. of Brominating Concentrate per 400 gallons with the pump running. Test frequently the first week and add Brominating Concentrate as needed to establish and maintain 3 - 6 ppm total bromine residual.

SoftSoak Sanitizer

All Spas 30 - 50 ppm.

Add 1 oz. of SoftSoak Sanitizer per 150 gallons with the spa running. Wait a full 30 minutes after other products have been applied before adding Sanitizer.

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