

# Water Chemistry FAQ

## (A) In Water

### Excessive Foaming

Possible Cause	Solution	Preventative Maintenance
Buildup of body oils, cosmetics and detergents from bathers	Add De-Foamer. Shock with Chlorine.	Use Chlorine on a regular basis to maintain residual sanitizer and to oxidize contaminants.
Calcium hardness too low	Add Calcium Booster to obtain 150-400 ppm calcium level in the water.	When adding make-up water or freshly filling the spa, have the calcium level tested.
Large amount of total dissolved solids	Drain and refill water.	Drain and refill water at least once every 120 days.

## (B) Odors and Irritation

### Eye / Skin Irritation

Possible Cause	Solution	Preventative Maintenance
pH or total alkalinity out of balance	Test water and adjust pH and total alkalinity as necessary using pH UP or pH DOWN.	Maintain a pH of 7.2 - 7.8 and total alkalinity of 80 - 120 ppm.
Chloramines or excessive organic contaminants	Shock water with Chlorine	Shock water weekly.

### Water Odor

Possible Cause	Solution	Preventative Maintenance
Excessive organic contaminants or lack of sanitizer	Shock treat with Chlorine. Maintain sanitizer level of 3-5 ppm.	Maintain sanitizer levels of 3-5 ppm.

## (C) Spa Surfaces and Equipment

### Chalky, White Scale Deposits

Possible Cause	Solution	Preventative Maintenance
High mineral content in water	Add 2 oz. of De-Scaler per 800 gallons of water.	Use De-scaler weekly.

### Scum Deposit on Waterline

Possible Cause	Solution	Preventative Maintenance
Oils, lotions and detergents from bathers have caused buildup	Clean scum line with an approved cleaner.	Shock water weekly. Maintain residual sanitizer levels.

## (D) Water Color

### Brown Water

Possible Cause	Solution	Preventative Maintenance
High iron or manganese content	Add a sequestering agent to sequester minerals in the water. Check pH level.	Test pH and total alkalinity and maintain proper levels. Sequestering agents should be used each time the spa is filled.

### Clear, Green Water

Possible Cause	Solution	Preventative Maintenance
Dissolved copper or iron in spa water	Add a sequestering agent to sequester minerals in the water. Check pH level..	Test pH and total alkalinity and maintain proper levels. Sequestering agents should be used each time the spa is filled.

### Cloudy Water

Possible Cause	Solution	Preventative Maintenance
Buildup of un-filterable material	Use 2 oz. of Clarifier per 800 gallons of water.	Use Clarifier regularly or as needed to clear up cloudy water.
pH or total alkalinity out of balance	Test water and adjust pH and total alkalinity as necessary using pH UP or pH DOWN.	Maintain a pH of 7.2 - 7.8 and total alkalinity of 80 - 120 ppm.
Dirty filter	Clean filter with Cartridge Cleaner or Filter Cleaner if dirty.	Clean filter with a Filter Cleaner on a monthly basis.
Calcium too high	Add 2 oz. of a De-scaler per 800 gallons of water.	Use a De-scaler on a weekly basis.
Excessive organic contaminants	Shock water with Chlorine. Check and adjust sanitizer level.	Shock water weekly to prevent build up of organic contaminants.

### Cloudy, Green Water

Possible Cause	Solution	Preventative Maintenance
Low sanitizer level	Shock water with Chlorine. Check and adjust sanitizer level.	Maintain a sanitizer level of 3-5 ppm.

**Question:** How often should I test my spa water?

**Answer:** Spa water should be tested weekly to ensure that the pH, Alkalinity and Sanitizer levels are adequate. It is also good practice to shock the spa water weekly and add Clarifier, De-Foamer and a De-Scaler.

**Question:** How often should I clean my spa's filter?

**Answer:** A clean filter is a key ingredient to maintaining sparkling, clear water, so you should clean your spa's filter monthly with a Cartridge Clean following label directions. You should soak your filter overnight, deep cleaning with a Filter Cleaner every three to six months or whenever you drain the spa.

**Question:** My cartridge filter is dirty, and I was told to just put it in my dishwasher to clean it. Is this the best way?

**Answer:** The dishwasher will clean out the larger debris, but can also damage the fabric on the filter. The best way to clean your filter is to use a filter cleaner that contains both acids and detergents and is designed specifically for cartridge cleaning. This will ensure that all oils, lotions and minerals will be removed from the filter. Cleaning properly increases the longevity of the cartridge. Check your cartridge filter once a month. Try Leisure Time FILTER CLEAN.

**Question:** Why do I need to drain the water in my spa every three months?

**Answer:** Although maintaining a proper chemical balance and sanitizer level will keep your spa water clean and clear, it is important to remember that a spa is a small body of water. So, continual use means bathers will deposit large amounts of dirt, perspiration, body oils, deodorant, make-up and other contaminants into a relatively small volume of water. If your spa is used heavily (approximately two people, three times a week, a half hour at a time) we recommend that you change your water every 90 days. If the spa is used less frequently, changing the water every 120 days should be adequate. Naturally, if a serious water quality problem arises, you'll want to change the water immediately.

**Question:** What else should I do when I drain the spa?

**Answer:** Clean the surface with an approved cleaner and wipe it dry. Inspect the jets to ensure that they are operating properly. Remove and calcium buildup with CLR or vinegar.

**Question:** How often should I clean my spa's cover?

**Answer:** Depending on use, plan to clean your spa's cover once a month. Pay particular attention to the waterside of the cover. A frequent cleaning of your cover will protect it and keep it smelling fresh.

**Question:** Sometimes I notice a musty odor coming from my spa. How do I prevent this?

**Answer:** First, clean your spas cover (both sides) thoroughly. Ensure that your spa area has proper ventilation if it's indoors. Second, check to see when you last drained your spa. Spas with water older than 60-90 days should be drained and refilled.

**Question:** Should I treat my spa water the same way as I treat my pool water?

**Answer:** Although the pH and total alkalinity measurements are the same, the sanitizer level (chlorine) should be kept between 3-5 ppm. In a spa, the filter requires more frequent cleanings. In addition, the water will require more frequent care to assure pH and sanitizer levels are correct.

**Question:** My dealer tells me not to use soft water (low calcium level) in my spa. Why is the calcium level important to my water's balance?

**Answer:** Too little calcium in the water can cause corrosion, particularly in heaters and other metal components. To increase the hardness to the recommended level of 150-400 ppm, add a calcium hardness increaser such as Leisure Time CALCIUM BOOSTER. Too much calcium can cause scaling on the walls and heating elements or cloudy water. To prevent calcium in the water from causing these problems, add a sequestering agent such as Leisure Time SPA DEFENDER.

**Question:** My spa has an ozonator. I have heard that I should not use a clarifier in my spa. Why?

**Answer:** Ozone is a highly reactive oxidizing agent. Some people are under the impression that ozone will destroy clarifiers and make them ineffective. We have found, however, that ozone does not affect the effectiveness of clarifiers. Clarifiers do provide a very real benefit in ozonated spas by helping the filter keep the water clean.

**Question:** My spa has odd-shaped white chips on the bottom after I shut it off! Where's this stuff coming from?

**Answer:** The white chips are calcium deposits (scale which forms on the heater elements) which are knocked off when the blowers and jets are on. This problem can be prevented by using a sequestering agent, such as Leisure Time SPA DEFENDER, on a weekly basis to prevent calcium in the water from forming deposits.

**Question:** My spa is foaming. Why?

**Answer:** There are several reasons that a spa foams. A common cause is the rapidly moving water combined with bathers bringing in soaps and detergents on their bodies and bathing suits. Showering before entering the spa helps prevent this problem. If excess detergents are the cause of the foam, using a defoamer such as a Leisure Time FOAM DOWN.

Another cause of foaming is soft water. This means that the calcium level in the water is low. This can be corrected by raising the calcium level to 150-400 ppm.

Organic waste build up can also cause foaming. By shocking the spa on a regular basis, the wastes are oxidized out of the water and foaming is reduced.

**Question:** How often do I really need to shock my spa water?

**Answer:** How often you shock spa water depends on the sanitizer used and the bather load. If you are using chlorine, it is recommended that you shock at least one time per week. It may be necessary to shock more often if the bather load is heavy or the water is cloudy.

**Question:** I have an ozonator on my hot tub. Do I need to use a sanitizer with it?

**Answer:** Yes. Even though ozone is an effective oxidizer and will even destroy microorganisms directly exposed to the ozone, the ozone is relatively short lived in your hot tub water. As such the ozone is not present in the water for a sufficient length of time to assure adequate sanitation of the entire tub and the surfaces and plumbing. The use of an ozonator will reduce your consumption of chlorine or bromine as it makes it easier to maintain proper levels of these in the water it does not eliminate their usefulness.



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