

## Hot Tub Chemical Tutorial - Basic Maintenance



### YOUTUBE TUTORIALS

Watch Alistair Explain Water Chemistry Part 1, 2 & 3!

[www.youtube.com/c/thehottubshop](http://www.youtube.com/c/thehottubshop)

### [SPA TEST STRIPS](#) - INSTA-TEST 3 PLUS

**The WHY:** Insta-Test is a quick and straightforward way to monitor the levels of Alkalinity (TA+), pH (pH+), & Chlorine (FCL) or Bromine (Br) in the water.

**The HOW:** Dip the strip into the water and compare the colours to the chart located on the bottle. If you have recently added chemicals, run the pumps & wait a minimum of 2 hours before testing the water. Testing too quickly will result in inaccurate readings.

### [ALKALINITY](#) - DAZZLE BALANCE TA+ (Total Alkalinity)

**The WHY:** TA Stands for Total Alkalinity & helps to *stabilize* the pH levels in the water. If Alkalinity is low, pH will burn off faster. Increase/balance your Alkalinity levels 1<sup>st</sup>, and pH levels 2<sup>nd</sup> \* *\*See Note On Page 2\**

**The HOW:** The goal is between 80-120ppm, which gives you a range of 40ppm to have an acceptable level. Focus less on aiming for perfection. Instead, avoid faded or vibrant colours to maintain your Alkalinity levels. If the test strip reads **faded 0-40ppm**, add TA+ to the water with running jets. Wait a minimum of 2 hours to re-test. Repeat this until you have the ideal colour range. It's okay to bring TA+ up slowly, over several hours or a few days, to ensure you don't overdo it. For maintenance, check levels once a week and add as needed. If your Alkalinity levels read too **vibrant 180-240ppm** and you need to bring them down, you can use a pH down (which will also reduce your pH)

### HOW MUCH TO ADD:

*\*These are estimated values to give you an idea of how much to put in your hot tub. Adding small increments & being consistent is more important than being exact\**

Small Tub (68"-76") 1000L - Med Tub (78"-86") 1500L - Large Tub (88" – 96") 2000L

20g or 2 Capfuls = 10ppm/1000L

30g or 3 Capfuls = 10ppm/1500L

40g or 4 Capfuls = 10ppm/2000L



pH

DAZZLE BALANCE pH+ (up) / DAZZLE BALANCE pH- (down)

**The WHY:** pH signifies the acidity/alkaline level in the water. Your sanitizer (Chlorine/Bromine) is an acidic product that will continue to drive your pH levels down. When pH is low, the water is more acidic. If you don't continually bring these levels back up, the water's acidity will break down plastics/metal components in the hot tub at an accelerated rate. You will need **pH+** to increase the levels.

Sometimes pH Levels are high right out of the gate (Fresh Tap or Well Water), meaning the water is more alkaline; this can result in skin irritations during soaks. You will need **pH-** to decrease the levels.

**The HOW:** The goal is between **7.2 & 7.8**, giving you a range of **0.40** to have an acceptable level. Focus less on aiming for perfection; instead, try to avoid the faded or vibrant colours to maintain your pH levels. If the test strip reads **faded 6.2 – 6.8**, add **pH+** to the water with running jets. Wait a minimum of 2 hours to re-test with a strip. Repeat this until you are in the ideal colour range. It's okay to bring **pH+** up slowly, over several hours or a few days, to ensure you don't go over. For maintenance, check levels once a week and add as needed. If your pH levels read too **vibrant, 8.4-9.0**, and you need to bring them down; you can use a **pH-** (down)

*NOTE \* If you need to bring your pH levels **DOWN**, do this before increasing your Alkalinity, as the **pH-** will also drive your **Alkalinity** levels down significantly\**

## HOW MUCH TO ADD:

*\*These are estimated values to give you an idea of how much to put in your hot tub. Again remember, adding small increments & being consistent is more important than being exact\**

Small Tub (68"-76") 1000L - Med Tub (78"-86") 1500L - Large Tub (88" – 96") 2000L

24g or 2.5 Capfuls = pH under 7.2/1000L

36g or 3.5 Capfuls = pH under 7.2/1500L

48g or 4.5 Capfuls = pH under 7.2/2000L

## CHLORINE    DAZZLE MINI CHLORINE TABLETS

**The WHY:** Chlorine is an optimal choice for sanitization. Hot water is an ideal breeding ground for bacteria, and chlorine is quick & effective in killing bacteria regardless of the pH and alkalinity levels. It works by creating chemical reactions with oils, suntan lotion, moisturizers or anything else left behind by bathers.

**The HOW:** For good measure, adding two tablets of chlorine upon starting fresh is recommended but not necessary until after your first use. After soaking in the hot tub, for maintenance, add the recommended amount of Chlorine tablets to kill any bacteria left behind. Having a chlorine reading on the test strip is (advised by Health Canada) but is not necessary to safely enter the water for the next soak. Look for signs of clean water, including clarity and scent. If the water looks clear & smells clean, then often it is!

### HOW MUCH TO ADD:

0 – 0.5 ppm	<b>WHITE - FADED</b>	= Add 2 Tablets
1 – 3 ppm	<b>FADED - LIGHT</b>	= Add 1 Tablet
5 – 10 ppm	<b>LIGHT - BRIGHT</b>	= Add 0 Tablets

## BROMINE    DAZZLE MINI BROMINE TABLETS

**The Why:** Bromine can be used alternatively to chlorine, based on personal preference for sanitization. Bromine is a softer chemical, and it's recommended to be dissolving in the water at all times. It also requires additional diligence to be effective. This chemical dissolves slowly and works best when your pH and Alkalinity levels reside in their recommended ranges.

**The HOW:** Add two tablets to a chemical floater or into your skimmer basket. For smaller tubs, add one tablet at a time. Add more tablets as they get close to dissolving.

**Dazzle Product Line:** [Bromine Tablets](#)

## SHOCK    DAZZLE AMAZE & AMAZE+

**The WHY:** Once Chlorine/Bromine comes in contact with organic material, it leaves behind chloramines/bromines, scented inactive particles that can no longer kill bacteria. These particles build up in the water and require oxidation to release them. Using a shocking agent designed for hot tubs will oxidize the chloramines/bromines, reducing the scent/irritations associated with these sanitizers. There are chlorinated and non-chlorinated shocks available. Having a chlorine-based shock will help when your water chemistry goes un-treated, and you need a quick-dissolving treatment as a boost to combat excess bacteria.

**The HOW:** Once a week, put a cap full of [Amaze Plus](#) into the Hot Tub with the pumps on high speed and let the water circulate with the cover off for one cycle to allow for aeration. (Pumps should time out and turn off after about 15 minutes)

### **Additional Uses:**

1. If there has been a hefty bather load, add a cap full of [Amaze Plus](#) after the tub has finished use for the day.
2. If the water becomes neglected & requires extra sanitization treatment, add a cap full of [Amaze Plus](#) in conjunction with chlorinating tablets.

## FILTER CLEANER    DAZZLE RAPID ACTION FILTER CLEANSE

**The WHY:** The filter is responsible for catching particles and oils left behind by bathers. Cleaning your filter monthly will result in having cleaner water and reduced sanitizer usage. It is arguably the most essential component of Hot Tub maintenance. Dirty filters will result in poor water quality. Your sanitizer will use up its resources trying to combat bacteria/oils caught in the filter and not the bacteria residing in the body of water.

### **The HOW:**

**Every 1 – 2 Weeks,** Rinse Filters with a garden hose nozzle on Jet Spray to remove debris caught between the pleats.

**Every 2 – 4 Weeks** – After rinsing the filters, soak in a bucket with enough water to cover the fabric pleats and 1/3<sup>rd</sup> bottle of Rapid Action Filter Cleanse Solution. Allow to soak for about 1-2 hours & rinse with the hose. Alternatively, you can place Rapid Action Filter Cleanse in a spray bottle. Spray your filters down, let them sit for 1-2 hours, and rinse.

Ask us how to get Sparkling Clean Filters, QUICKER and EASIER with the

**Estelle** Filter Cleaning System



## ✚ How do I fix cloudy water?

- Ensure you have completed all of the steps recommended in **PART 1 – Basic Maintenance**
- Use a **CLARIFIER** – Dazzle Nature Sheen

**The WHY:** Clarifiers can come in a powder or liquid form. A clarifier helps accumulate oils, so the filter can easily catch them. Not all of the oils and particles will make it to your filter immediately, so often, after use, this will show up as a SCUM line deposited on the inside perimeter of your hot tub.

**The HOW:** Use as needed. A clarifier is a highly concentrated product. The recommended dose is 20ml per 1000L of water. Give the bottle 1 or 2 squeezes into circulating water and let the jets run on high for one cycle. A scum line will appear on the perimeter of your hot tub, which you can wash with a cloth and encourage the capture of debris towards the skimmer/filter. Schedule a filter cleaning following the clarifier treatment to remove the oils & debris accumulated in the filter.

## ✚ Why is my hot tub suddenly a bubble bath?

- Use a **DEFOAMER** – Dazzle Defoamer

**The WHY:** Soap residues from skin or swimsuits can cause a mini bubble bath.

**The HOW:** This is also a highly concentrated product. Use extremely sparingly, or you may end up with an oily film on the surface of your water! The recommended dose is 10ml per 1000L of water. Run the jets at high speed to agitate bubbles. Shake up the bottle of the defoamer and give one light squeeze into the circulating water. Let this work into the body of water for several minutes before adding more. Often this will be enough to take care of any bubbles forming in the hot tub. Alternatively, the defoamer can be placed directly into a spray bottle and misted onto the water's surface, giving you the best control over how much product is used.

- 🔧 My hot tub has been EMPTY for several months?
- 🔧 How to clean a PRE-OWNED hot tub?
- 🔧 Why Does my hot tub water have little white flakes in it?

➤ Use a [DRAIN PREP – Dazzle Drain Prep](#)

**The WHY:** A tub that has been winterized or just shut off for an extended period can result in residual water left in the pipes. The stagnant water is an ideal breeding ground for bacteria. Once re-filled, bacteria will circulate through the new body of water and flow through the plumbing. You may notice that it doesn't smell or look very clean even though you have filled it up fresh. Or you bought the tub 2<sup>nd</sup> hand, and it might be a good idea to give it a good clean when you're unfamiliar with the previous owner's sanitation procedures. In another scenario, the tub has been in use, and the chemicals have been neglected for an extended period, leaving you with little white flakes (bacteria) floating in the water. A proper Sanitize/Drain/Re-Fill will be necessary to re-enter the tub safely.

**The HOW:**

1. Remove your filters and use this time to soak/rinse them with a filter cleaning solution. If previous owners used the filters, I'd recommend purchasing new & discarding the old ones.
2. Add a bottle of [Drain Prep](#) to a whole body of water. Add 1 Capful of [Amaze Plus](#) (Chlorinated Shock) and 1-2 Tablets of [Chlorine](#).
3. The Drain Prep will lift the organic material from the pipes while the chlorine neutralizes the bacteria. Run this solution for a **minimum of 24hrs** while cycling the jets as often as possible. Bring your tub up to temperature for best results, and allow 2-3 days to cycle with this solution.
4. Test each day for Chlorine Levels. If the strip is FADED or white, the chlorine you have added to the tub has been busy! Please add more. Do not add more if there is still a chlorine reading on your strip. During this process, over chlorination is not a concern as the water will be re-filled before use.
5. If familiar with the topside's programming, we recommend increasing the filtration cycle during this time to keep the water moving as much as possible.
6. Once complete, drain the tub and use a Wet/Dry Vacuum to remove the remaining water from the footwell and inside the tub drawing through each jet. You may give it an optional wipe on the inside with a vinegar solution. Just be sure to rinse and vacuum if any commercial products have been used.
7. Install new or clean filters, re-fill with fresh water, and follow– [Basic Maintenance](#)

## Why is my water turning Reddish/Brown?

- Use a [METAL STAIN & SCALE – AQUA COP-OUT](#)

**The WHY:** A high concentration of copper or iron typically found in Well Water is oxidized by the chlorine, instantly producing a rusted colour in your hot tub.

**The HOW:** This is a highly concentrated product. The recommended dose is 12ml per 1000L. Add a small amount of product to the water with the jets on. Allow the product to circulate into the water for at least 20 minutes before adding the 2<sup>nd</sup> dose if required. If the Reddish/brown colour persists, add another small amount. The Cop-Out will solubilize the copper/iron in the water returning your water clarity to normal. If you have a hefty concentration of metals in your water, the cop-out may appear as a "pink dust" available to be siphoned out of the tub.

## How Do I remove dirt/debris that settles on the bottom?

- Use a [SPA VACUUM – QUICK VAC](#)

**The WHY:** Hair, sand, dirt...you name it. Not everything gets caught by the filter; instead of settling to the bottom of the tub and seating.

**The HOW:** The Quickvac has a clear plastic tube containing a check valve attached to a hose. Pump the tube up and down into the water, establishing water flow and creating a siphon, and now you can direct the tube anywhere in the water to remove all the little bits of debris settled in the footwell.

## How Do I drain my hot tub?

- Use a [SPA DRAIN – QUICK DRAIN](#)

**The WHY:** Generally, hot tubs can come equipped with a drain valve, but they can fail or be un-accessible. Or depending on where your tub sits, you might need an extra hose to avoid flooding the area immediately surrounding your hot tub.

**The HOW:** The Quick Drain has a large clear plastic tube containing a check valve attached to a hose. Position the hose to lie below the bottom of the tub is drained. Pump the tube into the water with long & fast strokes approx. 10-15 times to establish water flow. To maximize flow, wait 1 minute and then pump 5-10 more times. Let rest in the footwell of your tub until drained. If you want to remove any residual water, you can use a wet/dry vacuum.

## Do I need to add calcium to my hot tub?

### ➤ CALCIUM

**The WHY:** While it is true if your tap water doesn't have enough calcium (soft water), it will corrode the materials with which it comes into contact. Typically, you'll see evidence of this corrosion in your home around the drains in your sinks & bathtubs.

The range for Calcium Hardness is wide. 80 - 200ppm. Most of the City Water contains more than enough calcium, so you're not experiencing pitting in your bathroom sinks/tubs.

We find that adding calcium to the water tends to cause more issues than benefits for most users. You start to get into an unnecessary balancing act. Add calcium to the water, and then add Stain & Scale to neutralize it so you don't get the scaling. You are essentially making those two products redundant. Too much calcium in the water shows up as a white ring around the hot tub's inner perimeter. It also coats heaters and the interior walls of your plumbing. Once the calcium is there, it is challenging (if not impossible) to remove. You end up with constant white flakes showing up in your water. Over time, this will require you to start replacing equipment and components sooner than expected.

**The HOW:** If you're a stickler for ensuring your levels are perfect, including calcium, we recommend having no more than 80-100ppm max. There is one exception; calcium is required if the hot tub water comes from a well-water source entirely void of calcium. Please follow the directions carefully in these cases and add specific amounts appropriate to the hot tub's water capacity.