

Metal Stain Treatment & Removal:

If it's too late & you already have staining:

1. Get the water balanced. Keep in mind that further discoloration **COULD** occur. This is a temporary phenomena & will clear once the treat process is complete.
2. For light staining of iron & copper, use BioGuard® Pool Magnet at a rate of 1 qt. per 10,000 gallons of water. BioGuard Pool Magnet works well on "fresh" stains. Avoid shocking the pool for about 3 days.
3. For heavy staining, Jack's Magic® Blue Stuff is an excellent product. We like Jack's Magic because you can have high or higher amounts of chlorine present (in excess of 10.0 ppm).
4. For light to medium staining on pool steps BioGuard® Stain Remover is a good product.
5. Heavy metal staining on vinyl, fiberglass or acrylic steps can be treated with Jack's Magic® Step Stuff.

6. Save yourself time, money & effort using Jack's Magic® Stain ID Kit. It really helps in identifying the exact metal that's causing the stain.

The earlier a stain is identified and treated, the more successful treatment will be.

Some of the information contained in this article is courtesy of the BioGuard® Chem PLUS 2003, 2004 Reference Guide and Jack's Magic CSS Reference Manual.



BioGuard® Pool Magnet - great for light staining on all pool surfaces. Chlorine or Bromine levels must be below 3.0 ppm for best results. For use in treating iron, copper and manganese.



BioGuard® Stain Remover - granules that aid in the removal of fresh iron, copper & manganese stains.



Jack's Magic® Pink Stuff - an additive to prevent & treat metal stains, especially copper. Add to freshly filling pools to prevent metal staining on pool surfaces. May be used in pools with high (over 3.0 ppm) chlorine levels.



Jack's Magic® Blue Stuff - an additive to prevent & treat metal stains, especially iron. Add to freshly filling pools to prevent metal staining on pool surfaces. May be used in pools with high (over 3.0 ppm) chlorine levels.

Metal Stains. What they are. How to treat them.

**Important information
for all swimming pool
owners who need to
treat stains caused by
heavy metals found in
water.**



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"Make life simple. Make life better."

Pool Stains & staining caused by metals. Colored water.

MOST, if not all, staining on pool surfaces are preventable. The problem is that most people don't realize they have metals in their water.



Even trace amounts of these metals (iron, copper, manganese, cobalt, silver) can cause metal staining.

In fact there's enough copper in ONE penny to completely stain an average sized swimming pool! Obviously, the conditions have to be right. This is where prevention & good, proper pool care come into play.

Here's what happens: metals come into your pool whenever fresh, make-up water is added. Metals are dissolved in the water. Whether it's municipal water or well water, metals can be present.

As the metals accumulate, the greater the chance that they will eventually come out of solution. Once out of solution, they make the water cloudy or worse, they "plate out" on the pool's surfaces & stain. Metals can come out of solution through a variety of ways. But there's 2 that typically happen.

When a pool is shocked whether with chlorine or a non-chlorine oxidizer, the shock oxidizes everything in the water, including metals. Oxidized metals become "rust" in the case of iron (shown at right) or "Verdi gris" in the case of copper (as shown above).

In the second way, metals come out of solution or are left "exposed" when the pH, Total Alkalinity and/or Calcium Hardness are left unchecked & allowed to go low (pH below 7.2, Total Alkalinity below 80 ppm [non-Pristine Blue pools], Calcium Hardness below 100 ppm). The water becomes aggressive & the metals are more susceptible to oxidation. In many cases, pool-owners don't properly test their water & simply rely on the "look" of the water (the water's clear, everything must be alright). This is typically the case with blonde hair turning green – low pH helps bring copper out of solution & "plates" it out on the person's hair! People blame the chlorine, but it's the copper in the water.

When it comes to testing, remember that you can only test for metals when they are in solution. Once oxidized, the metals come out of solution & cannot be tested.

That's why once a metal stain has occurred, the metal test will NOT show any metals present.

Here's how to prevent metal stains:

Keep the water balanced: pH 7.4 – 7.6; Total Alkalinity 125 – 150 ppm (vinyl pools), 80 – 125 ppm (plaster /



gunite pools) (Please note that these TA values ARE NOT applicable in Pristine Blue

treated pools where the TA is to be maintained at no higher than 80 ppm);

Calcium Hardness 200 – 250 ppm (vinyl pools), 225 – 275 ppm (plaster / gunite pools).

In other words, have your water professionally tested at opening, mid-season & at closing (at least) – make sure they perform a copper and an iron test.

Prevent metal stains by using BioGuard Pool Magnet or Jack's Magic Blue Stuff or Pink Stuff (sequestering agents) when filling the pool then adding a maintenance dosage monthly.

Keep in mind that once stains appear on pool surfaces, they may be difficult to remove. Much patience is required when dealing with metal stains. Time and possible multiple treatments will be



needed to thoroughly remove the stains. After removal, diligence must be used to prevent future metal staining.

If you have well-water, always treat the water with BioGuard® Pool Magnet, Jack's Magic® Blue Stuff or Pink Stuff.

If you have municipal water, using any one of these products won't hurt.

Side note: as more municipalities around the country use chloramination to treat the drinking water, more heavy metals such as iron & copper appear to be present in the water.

As **Certified Stain Specialists**, Par Pool & Spa is committed to the proper prevention and treatment of swimming pool & spa water. We have been trained to identify and understand what stains are, where they come from and how to properly treat these stains.