

Beerstone

by Mike Retzlaff

It's been around for as long as people have been brewing. Beerstone is a precipitate formed of calcium and magnesium from the water and proteins and tannins from the malt. It is usually just called calcium oxalate; that tannish-brown (sometimes grayish-white) coating that all of us eventually see in our kettles, corny kegs, and other equipment. It starts out looking like a stain but can resemble a coat of paint if left unattended. It's nothing new as it has been found in the surviving clay amphorae of the Sumerians, Egyptians, and other ancient cultures. They transported and stored beer in these jugs.

If it were only an aesthetic concern, we might cherish it as if it were the patina of an old bronze statue. In reality it isn't attractive, and more importantly, can cause us problems. One detriment is that in the kettle it acts as an insulator and doesn't allow all the BTUs from your heat source to get into the wort. In a chill plate, it insulates the beer from the ice bath. The much bigger problem is that it can harbor all sorts of nasty little bugs which can cause infections in our beer. It needs to be removed from time to time. If you don't, it will continue to collect like so many coats of paint. I am unaware of any way to stop it from attaching itself to our equipment but there are various ways to remove it.

The old tried and true method is to use a caustic in a 2% – 4% concentration. Once the caustic has done its job, a rinse with a phosphoric based acid will neutralize the caustic. If you have a build-up that looks like a thick coat of paint, this is probably the way to go. One of the side effects of using even a mild acid on stainless steel is that silicates are removed from the surface which makes it more susceptible to future build-up of beerstone. When using this method on stainless steel, you'll need to scrub the treated surface with Scotch Brite, steel wool, or other mild abrasive and allow the

surface to passivate. Passivation is the formation of chromium oxide which forms a microscopic barrier that keeps the steel from corroding. Don't worry; it'll do it automatically if clean, dry, and exposed to air.

For maintaining my equipment, I've found a solution which seems a lot safer than using caustics and acids. B-Brite is available just about anywhere a brewer shops. It is a percarbonate cleanser/sanitizer. Although One Step and Easy Clean seem to be the same thing, I haven't tried either for this purpose. A tablespoon per gallon of hot water is all it takes. A minimum soak of an hour will dissolve or loosen most anything sticking to the inside of your kettle, chill plate, or keg. It will clean around the handle rivets and bulkhead fittings of kettles where you really can't get in there to scrub. My corny kegs stay clean and bright without having to stick my fat arm through those "smaller than my fat arm" oval hatches. It will also clean your plastic mash tun without having to scrub it with anything rougher than your hand. I simply rinse my vessels with tap water after the soaking is done and all my stuff stays clean and shiny.

5 Star Chemicals promises a beerstone remover but it isn't on the market yet. If it works as good as the rest of their products, I just might abandon the B-Brite.

Note! You can save the B-Brite solution and use it to remove beer bottle labels. Labels generally just slide off after soaking for an hour. It also works like a charm to clean your glass coffee carafe.

Hank B. will be glad to know that B-Brite is completely biodegradable –

go green and
SAVE THE CHOUPIQUE!