



## The Importance of Sanitization

We're all aware of the risk of potential spoilage of our wines due to contamination by certain wild bacteria and yeasts. If it hasn't happened to you, it's likely you probably know somebody from your local winemaking club or your favorite online forum who has encountered an issue with spoilage organisms. Considering all the work we do to coax our wines from the newborn, just-fermented phase all the way to full maturity and bottling; considering all the time, sweat, tears money and (at least for me!) blood that goes into the process; shouldn't we do everything that we can to prevent any kind of spoilage from taking place? One of the key ways that this can be done is through proper sanitization practices in your winery.

From Crush to Bottling, at every stage in the winemaking process, any tools, containers or equipment that your wine touches or that touches your wine should be sanitized ahead of time. Your hands and arms should be clean when you begin working with equipment. Really, the more you treat your winery like a hospital operating room (let's say, short of actually performing surgery there) the better it will be for your end result. Sanitization is typically done in two separate steps.

### Step 1: Expose the surface to be sanitized

What does this really mean? Basically, clean it. Make sure your equipment, tools or whatever are free of any dirt, solids, film or grime. If they aren't, then you will need to scrub it off with a sponge, brush or white scrub pad (CE27) and water. Exposing the surface to be sanitized is important because sanitizer only work via direct contact. If you have a layer of dirt or a dried grape skin that doesn't get removed before you sanitize, then this actually prevents the sanitizer from reaching the bacteria and/or yeast under said dirt or grape skin and they will not be killed! Only clean surfaces can be sanitized.

- Most equipment in the winery can be cleaned easily with nothing more than hot water and a scrubber, as long as they are cleaned immediately after being used / emptied.
- Stubborn stains and new equipment (which often has residual oils from the manufacturing process on it) can be easily cleaned using Powdered Brewery Wash (CL25, often referred to as PBW). PBW is a non-hazardous, buffered alkaline cleaner. Don't be fooled by the word "brewery" in the name, this stuff works great on all kinds of organic deposits. Highly effective and easy. PBW will not corrode soft metals.

- Short lengths of tubing can be cleaned with a long Line Brush made for this purpose (CE45-CE70). Longer lengths of hose can be cleaned by filling them with PBW solution and passing a Cleaning Ball (TUB610-TUB616) through them using a pump.

**Note:** Avoid using stainless scrub pads (stainless Brillo or SOS pads) on stainless or plastic vessels, as they can scratch the surface and create grooves which can harbor spoilage organisms. In extreme cases you may even compromise the finish of stainless steel itself.

### Step 2: Sanitize!

Once the surface is clean it can now be sanitized. This is done by preparing the sanitizer and pouring, wiping, or swirling to make sure the sanitizer wets all the surfaces needing to be sanitized. After waiting for the manufacturers recommended contact time, rinse the equipment off with fresh, clean water if necessary. Congratulations, you have now sanitized!

By far the most popular method of sanitizing equipment for most winemakers is to use a solution of metabisulfite and citric acid on their equipment. MoreWine! recommends against this method for a few key reasons, but there's one that pretty much trumps all the rest:

- The often-used 10% metabisulfite solution is about 2000 times more concentrated with sulfite than the average wine. Rinsing or soaking your equipment in this solution will leave a high amount of residual sulfite on the equipment which will transfer over into your wine unless you rinse it off. Unless you're using pre-boiled water or something like it to rinse off the equipment you'd be using regular tap water, which is not sanitary, at which point you're undoing much of the work that you've just done.

Here at MoreWine!, in addition to offering metabisulfite and citric acid for sale, we also offer 3 dedicated sanitizing products, none of which require a rinse before the equipment comes in contact with wine:

- IO-Star: IO-Star is an iodine-based sanitizing solution. Iodine based sanitizer have been available to home-fermentation enthusiasts for years now, having been popularized early on in the resurgence of homebrewing. IO-Star is convenient and easy to use, but carries the risk of imparting a flavor or aroma of iodine into the wine which it comes in contact with – especially white and fruit wines whose aromas are more delicate.

- Saniclean: Saniclean is an acid-based sanitizing agent and is very effective. Saniclean is sold in 32oz bottles of concentrate and is diluted at a rate of 2oz/5gal of sanitizer. It requires a 2 minute contact time, after which your equipment is ready to use. Saniclean is also non-foaming, which makes it great for working on pumps and tubing.
- StarSan: StarSan is by far our preferred sanitizing agent here at *MoreWine!* (as well as at *MoreBeer!*, we might add). StarSan is also an acid-based sanitizer which is sold in a 32oz bottle of concentrate. It is used at a rate of 1oz/5gal and only requires a 1 minute contact time. Additionally, StarSan foams up if agitated and this foam has the same sanitizing properties as the liquid itself – great for putting a little in the bottom of a carboy, shaking and then turning upside down! StarSan is 100% safe to consume or come in contact with (when diluted – use care when handling the concentrate) which means you can sanitize your hands and arms before getting work. Finally, StarSan is completely biodegradable. In fact, it starts to break down as soon as it comes in contact with any organic matter. That means that the little bit of it that was left on your crusher or in your carboy started breaking down once it came in contact with your must or wine. Within about 4 hours it is reduced to simple organic molecules and as a result it carries no risk of ever imparting a flavor or aroma impact on your wine.

## In Conclusion

Whatever type of sanitizing agent you choose to work with, what is most important is that you take the time to be sure that you are thoroughly cleaning and sanitizing your equipment prior to its coming in contact with your wine or juice. Yes you have sulfite in the wine, and yes part of sulfite's role is to help inhibit wild yeasts and bacteria. However, the better you are at keeping things clean and sanitized, the better your sulfite will be able to combat any oxidation that may take place and handle any wayward yeast or bacteria that happen to make their way into your container when you open it. The sulfite levels that winemaking texts recommend you maintain in your wine are geared towards this type of function for the sulfite. The same as these recommended levels are not intended to fight the oxidation that could take place in a container that is not kept topped-up; they are not intended to fight the contamination that can happen when the wine comes in contact with un-sanitized equipment. So take the little bit of extra time, and spend the little bit of extra money to help make sure that the wine you will have invested so much of yourself in come bottling day is still just as good as the day you finished fermentation. You, your family and your friends will all be glad that you did!