



The Cellar

The Official Newsletter of the Colonial Ale Smiths and Keggers

Beer Blitz and Ales for Archaeology: Gotta Be There!

By Norman W. Schaeffler

There are two big beer events between now and our next meeting and CASK is going to have a big role in each of them.

The first of them is this Saturday, September 22, at Endview Plantation. The Second Annual "Ales for Archaeology" fund raising beer festival for the Newport News Archaeology group. Those of you who went last year will remember a great event with great music, BBQ, and craft brew, just a bit cold. This year it will be warmer and bigger than last year. The event runs from 11 AM to 6 PM and tickets are \$22 in advance, \$25 at the gate. Currently there are 14 breweries scheduled to be there to sample from: Bar Harbor Brewing Co (ME) • Bluegrass Brewing Co (KY) • Brooklyn Brewery (NY) • Dogfish Head Brewing Co (DE) • Green Flash Brewing Co (CA) • Hales Ales (WA) • Wild Goose (MD) • Left Hand Brewing Co (CO) • Mendocino Brewing Co (CA) • Nectar Ales (CA) • Otter Creek (VT) • Old Dominion Brewing Co (VA) • Rogue (OR) • St. George Brewing Co (VA)

The second event is two weeks from this Saturday on October 6. The 1st Annual Virginia Sports Hall of Fame Beer Blitz. This events will feature a homebrew competition and a "celebration of craft brew" with live music, food and craft beer. It will be held at the Virginia Sports Hall of Fame and Museum in Portsmouth. CASK is organizing the homebrew competition. The Weekend Brewer is sponsoring the "Best of Show" prize.

We need more judges and stewards. If you have ever thought about working a competition, now is the time! Please contact Harrision Gibbs (Judges) or Dave Bridges (Stewards).

2nd Annual

Ales for Archaeology

BREW TASTING & BBQ

-- FEATURING --

- 14 Breweries • Vendors
- Pit-cooked BBQ Meal with all the fixings
- Living History • Archaeology Displays
- Live Musical Entertainment by Fat Tony and Special Ed and the Short Bus

A FUNDRAISER FOR
Newport News
Archaeology

September 22 11 a.m.-6 p.m.
Endview Plantation • Newport News, VA
362 Yorktown Road • From I-64 use Exit 247

-- TICKETS --

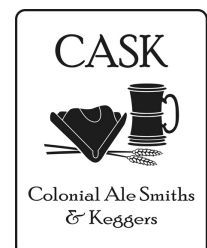
TASTING ~ \$25
6 6 oz. tastings, additional \$1 each

NON TASTING ~ \$22

For Information,
call (757) 247-8523 Ext. 310

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The Cellarmaster

By Steven Davis

“Sanitation 101 – Direct from the Master Himself”

Each individual who gets into homebrewing is always told that the most important aspect of making good beer is maintaining proper cleanliness throughout the process. In fact, the number one cause of beer off-flavors is due to “improper sanitation”. But what exactly does that mean? Sanitize, Sanitize, Sanitize is the cry of every homebrewer. However, no matter how hard we try, we all seem to end up with that batch where “something just went wrong”. As an experienced homebrewer, I believed that I had the cleanliness part of the process down (though sometimes willingly cutting corners to save time), but it was not until my recent attendance of a lecture on homebrew sanitation that I realized just how many misconceptions, and misunderstandings I really had about the processes involved. I figured it only right that I share my newfound information with my fellow CASK members, so we can all make better beer together.

First and foremost I must give credit for the information I will provide here to the one it is due, Charlie Talley of Five Star Chemicals. I recently attended Charlie's lecture at the National Homebrewers Conference in Denver, and was amazed at the man's knowledge of chemistry and sanitation. It soon became very apparent as to why Charlie was so knowledgeable and the one giving this lecture. It was noted that as a chemist working for West Argo in 1965, Charlie was the person who created Idophor, an iodine based sanitizer used throughout the brewing and medical industries. Again in 1972, as a chemist working for Pennwalt Lab, Charlie discovered Acid Anionics, a newer acid based sanitizer used heavily (and almost exclusively) throughout the food and beverage industries. It is this sanitizer which Charlie, as Five Star Chemicals chief chemist, has perfected into StarSan and SaniClean over the last several years. It is from Charlie's lecture which I will try to relay my notes here for everyone to benefit.

The first thing to understanding proper sanitation is to understand some basic rules of cleaning and sanitation:

1. YOU CAN ONLY SANITIZE CLEAN EQUIPMENT. All equipment MUST be properly cleaned PRIOR to sanitizing it.
2. Dirty equipment will ALWAYS contain bacteria.
3. Sanitizers are NOT cleaners, and will not penetrate solids to kill underlying spores.
4. One Step's DON'T WORK. By the laws of chemistry, all cleaners neutralize sanitizers (several homebrew suppliers probably didn't appreciate him putting this out).
5. The more heat and longer contact time, the better and easier the cleaning job becomes.
6. Never overuse cleaners or sanitizers. NEVER USE THE RULE “If a little is good, then a lot must be better”. Chemical residual is actually your friend, but too much residual causes problems.
7. If mixed correctly, sanitized equipment should NEVER be rinsed. This adds to the risk of reintroducing bacteria. Mixed properly, chlorine and idophor residuals are both below FDA limits and below taste sensory detection. StarSan & SaniClean foam residual is an excellent yeast nutrient and is not detectable by taste.
8. Several different cleaners and sanitizers exist on the market today, and certainly all of them can not be covered in this article; however, I will cover the four main sanitizers used by homebrewers to include general usage rules, pros and cons.

Chlorine (Bleach)

Effective as a sanitizer when used in 50-200 ppm concentration. Kills microorganisms by literally drying them out. Approved by the FDA as the sanitizing standard for the food industry (<150 ppm concentration does not require rinsing). Standard bleach will provide 75-100 ppm (optimal concentration) if mixed ¼ cup bleach to 5 gallons of water. <50 ppm will not effectively kill bacteria, and >200 ppm will result in detectable chlorine residual requiring rinsing.



Chlorine (Bleach) (cont)

Advantages:

- Inexpensive
- FDA approved for use on food
- Excellent for removing mold growth

Disadvantages:

- Corrosive to metals (especially stainless steel)
- Kills organic materials
- Affected by heat & pH
- Will not kill spores with a pH <9.0 (standard solution is a pH around 11.0, so an acid MUST be added to reduce pH to less than 9.0 (Vinegar works well, or you can use phosphoric, lactic or citric acid)
- Off flavors, if too high concentration used
- Requires minimum 30 minute contact time
- Short shelf life in storage

Idophor

Initially replaced Chlorine as the main sanitizer in the food industry, but lost popularity due to noted flavor loss in foods (due to misuse). Main sanitizer in medical industry. In concentrations of 12.5-25 ppm (optimal) flavor is not affected. Standard mixing for Idophor is 1-2 capfuls per 5 gallons (see product label). Charlie recommended going with twice the recommended amount on the bottle, because at <12.5 ppm, NO sanitation will take place. This is a case where too little is never effective.

Advantages:

- Its natural red color makes it self indicating. "When it's red it's dead"
- Mild on skin and low corrosive level
- Effective against spores
- Economical due to low concentrations needed
- Requires only short 2-3 minute contact time
- Long shelf life in storage

Disadvantages:

- Will stain hoses and plastics
- Some people have eye/skin irritations to prolonged exposure
- Affected by heat and pH. Will release iodine gas at higher temps

Acid Anionics (StarSan & SaniClean)

A synergism between Phosphoric acid and Anionic detergent which not only kills microorganisms, but also works in slightly soiled environments (can penetrate some soft solids). Kills microorganisms by establishing a pH/chemical environment not capable of sustaining growth. Currently available in foaming & non-foaming versions. Works effectively to kill 100% of microorganisms if mixed to concentrations delineated on labeling (1 oz StarSan or 2 oz SaniClean to 5 gallons of water produces optimal 300 ppm solution).



Acid Anionics (StarSan & SaniClean) (cont)

Advantages:

- Will wick into areas other sanitizers can not go
- No flavor or odor impact if mixed to proper levels
- Works in the presence of food soils (beer, wine, milk etc)
- Leaves environment in an acid condition with protective film to prevent recontamination
- Residual foam is a food nutrient at pH >3.5. Also an effective fertilizer for plants
- Requires only short 1-2 minute contact time
- Once pH is >3.5, product will not kill. Important if small residual of solution is left in container
- Long shelf life in storage

Disadvantages:

- Slightly corrosive in specific environments (not achieved during beer-making activities)
- Not suitable for Clean in Place applications, membrane type materials (mostly affecting pharmaceutical applications)
- Affected by pH. Above pH of 3.5, product is ineffective. This is easily visible to homebrewers as the product will become very cloudy.
- More expensive than alternatives

Heat

Effective at temperatures above 165°F (recommended 180°F). Fully effective at higher temperatures.

Advantages:

- Most effective method for sanitizing liquids to be added to beverage (one of the reasons you boil the wort)
- Fully effective on sanitizing metals (according to Charlie, to properly sanitize a plate chiller, heat it in a 350° oven for 1.5 to 2 hours)

Disadvantages:

- Can only be used on solid metals or glass
- Will damage plastics and o-rings
- Does not chemically remove microorganisms from surface
- Requires extended contact time to be effective (30 minutes to 2 hours depending on materials)

As you can see there are many options out there that you can use for sanitizers, including dozens I have not listed here. The key is to find what works for the application, and falls within your resources and budget. I believe that most homebrewers use a combination of all four sanitizing techniques I have listed here at one time or another in the beer making process. Charlie did emphasize over and over though that if one thing was going to be taken out of the lecture, to always remember that **YOU CAN ONLY SANITIZE CLEAN EQUIPMENT**. Hopefully with this information, we can continue making great beer on a more regular basis, and minimize those “something just went wrong” events to a truly rare occurrence. Cheers.



Oktoberfest: The Style and the Event

By Norman W. Schaeffler

First, there was the event. The first "Oktoberfest" took place in Munich, Germany on October 12, 1810 as a celebration of the marriage of Crown Prince Ludwig, later King Ludwig I, and Princess Therese of Saxe-Hildburghausen. At that time, the beer that was served was probably a Dunkel, a dark lager. The festival became an annual event from the very beginning, with time off for the Napoleonic War in 1813.

The beer style that we know as Oktoberfest, is actually more accurately called a Märzen. Märzen gets its name from the German word for March, which is the traditional time of year that the beer is brewed. In the days before temperature controlled fermentation, German law required that breweries not brew beer during the summer months to avoid spoiled beer. So March and April were busy times of the year, as brewers brewed overtime to insure a continuous supply of beer in the fall and into the winter. A beer with a slightly higher level of alcohol was brewed to be lagered in the ice caves over the summer and enjoyed at the fall festival. The style is said to have been invented by Gabriel Sedlmayr in 1872.

The BJCP style guidelines describe Oktoberfest/Märzen as dark gold to deep orange-red color in color. The flavor is described as "Initial malty sweetness, but finish is moderately dry. Distinctive and complex maltiness often includes a toasted aspect. Hop bitterness is moderate, and noble hop flavor is low to none. Balance is toward malt, though the finish is not sweet. Noticeable caramel or roasted flavors are inappropriate. Clean lager character with no diacetyl or fruity esters." This is a beer where malt is dominate flavor with just enough hops to balance the sweetness. The overall impressions go on to state that the beer should be "Smooth, clean, and rather rich, with a depth of malt character. This is one of the classic malty styles, with a maltiness that is often described as soft, complex, and elegant but never cloying." German law requires that an Oktoberfest beer have an original gravity of at least 13.5° Plato (OG 1.054), resulting in a beer which is about 5.4% ABV. The grain bill is usually made of either Munich or Vienna malts and German noble hops are used exclusively. American brewers sometimes make wider use of two-row malt.

Oktoberfest is now a celebration that takes place during the 16 days up to and including the first Sunday in October. Oktoberfest is known as the "Largest People's Fair in the World" and in 1999 there were six and a half million visitors. There are six Oktoberfest breweries: Spaten, Augustiner, Paulaner, Hacker-Pschorr, Hofbräu, and Löwenbräu. There are also currently 14 main tents to hold all the visitors, one of which is shown below.



Oktoberfest! (Photo from Wikipedia)



DIY Corner: A Carbonator Cap

By Norman W. Schaeffler

Recently one day I decided that I was going to build a carbonator cap. Actually it was because I wanted to see how easy it is to carbonate water at home and information on building a carbonator cap is well documented on the Internet.

Turns out that building a carbonator cap is easy. First, you need to go to the auto parts store and pick up a metal clamp-on tire valve stem for a tire rim. Where I picked up mine, they came two per package and were right around \$5. The package is on the left side of the photograph. The valve stem is designed to be inserted into a rim. There is a nut, washer, gasket and the stem itself in each assembly. I separated all the parts and ran them through the dishwasher to get everything clean. Now you need a top from a two-liter bottle. Carefully drill a hole through the center of the cap. I found that a final hole size of 0.500 inch works well. Take the gasket and trim off the vertical extension that you can see in the center portion of the photo. Put the washer back on the valve stem, with the side that you just cut facing up. Put the cylindrical part of the valve stem through the hole in the cap, starting from the inside of the cap. Put the washer and then the nut on the valve stem and tighten them. Repeat with another cap and the other stem. That's it, you are all done. Two carbonator caps for under \$5!



To carbonate some water, fill a clean empty two-liter bottle with cold water. It is very important that the water be cold, the colder the water the more carbon dioxide the water can absorb. Also, I have found that filtered water tastes better than water directly from the tap. Put one of the caps on the bottle, squeeze out as much air as possible and then tighten the cap. You need to have an air chuck that you can hook up to your CO₂ regulator. If you built one of my "Poor-Man's counter-pressure bottle-filler", you already have one. Set the regulator to 20 psi, connect the chuck to the valve and hold it on there so that you have gas flow. Shake the bottle good for twenty seconds, like you were making a cocktail. Make sure that you have gas flowing into the bottle during this time. Now you can disconnect the chuck and shake the bottle for twenty more seconds. That's it. You have now made carbonated water. I usually give the bottle another shot of 20 psi CO₂ to fully pressurize the headspace, but that is not necessary. You can carbonate anything like this.

You can, of course, also use this cap to fill a two-liter bottle with homebrew from your keg. Fill the bottle from your tap the best you can. Putting a length of tubing into the tap helps. Then, squeeze out as much air as possible and pressurize the headspace to whatever pressure you use with your keg. This will let you take some homebrew to a friend's house without the carbonation suffering.



The CASK Calendar of Club Events and Competitions

Plan your brewing year now and hit as many club-only and other competitions as possible.

September Märzen/Octoberfest
October Pilsner (**Club-Only**)
November Winter/Christmas Beers
December Free-For-All

November 15, 2007: November Meeting of CASK
7:30 PM at the [Williamsburg AleWerks](#). **Style of the Month: Winter/Christmas Beers**

December 20, 2007: December Meeting of CASK
7:30 PM at a location to be determined. **Style of the Month: Free-for-All**

September 20, 2007: September Meeting of CASK
7:30 PM at the [Williamsburg AleWerks](#). **Style of the Month: Marzen/Octoberfest**

September 22, 2007: Ales for Archeology at End-view Plantation 15 Breweries, live music, and a BBQ meal with all the fixings! What more could you want? Tickets: \$22 in advance and \$25 at the gate. Call 757-247-8523 ext. 310 for more information.

October 6, 2007: Virginia Sports Hall of Fame and Museum Beer Blitz Homebrew Competition This event is actually a fundraiser being put on by the VSHFM and will include a beer gala which will have food & beer, provided by the Bier Garden, as well as a live band and other activities, including a homebrew competition. The competition will accept beers from the following categories: 10 American Ale, 13 Stout, Porters, 14 India Pale Ale (IPA), 20 Fruit Beer, and 24 - 28 Mead & Ciders. This competition will take place in the evening, and will be partially open to the public.

October 6, 2007: World Beer Festival Durham The Historic Durham Athletic Park, Downtown Durham, NC. 1st Session: 12 noon to 4 pm, 2nd Session: 6 pm to 10 pm. Over 150 World-Class Breweries Participate in "All About Beer" Magazine's World Beer Festival Durham Serving up some of the World's Best Brews. USA Today says that the World Beer Festival is one of the "10 great beer festivals to tap into for some suds in the summer sun."

October 18, 2007: October Meeting of CASK 7:30 PM at the [Williamsburg AleWerks](#). **Style of the Month: Pilsner**

November 3, 2007: Teach A Friend to Homebrew Day The American Homebrewers Association (AHA) Teach a Friend to Homebrew Day is an international event to introduce people to the homebrewing hobby and establish relationships with local homebrew supply shops.