

NOTES FOR BOTTLING
by Bob Hilsman July 16, 2020

At first, when preparing notes for this meeting I was proceeding as a commercial winemaker with a 1000 case production. This morning I realized that this point of view would be irrelevant and useless information for those who are proud to be making and sharing 20 cases per year. How could a home winemaker justify buying a \$6500 corker, a \$4500 filler or even a \$1200 double diaphragm pump?

So I've tried to climb into the way back machine to when I was a happy, well-adjusted home winemaker. Then I didn't filter but I racked the wine far more frequently. I also would do fining, sparkolloid if the chardonnay stayed cloudy after racking and bentonite with the red wines. As a commercial winery I was prohibited from its use however as a condition of my septic permit (it will plug up a leach field) so I just used egg whites for reds, PVCC on chardonnay and gelatin for rosé.

Make sure that the wine is stable before bottling. Don't use sulfites until yeast and m/l fermentations are complete. ML testing with chromatography is easy and accurate. The reagent is expensive to ship because it's hazmat so pick it up from a chemical supply house. It lasts a long time if properly stored and it is reusable. There are SO₂ testing kits that use an ampoule to test a sample that are reasonably accurate and (back then) only cost about \$1 each.

Bottling is probably the most difficult, critical, labor intensive and expensive task in winemaking. So why bottle? Perhaps you don't really have to. Home brewers have long ago left bottling behind and kept the product refrigerated in kegs and tapped for serving. If they are going to a party they'll fill some growlers to take. Bars and restaurants do something similar for their "house wines". They are stored under pressurized nitrogen, not CO₂. This may be worth looking into if you are producing only for home consumption. No bottles, no labels, nothing to show off, just wine to drink with your supper! One could later fill a few bottles for takeout. A small producer could consume 80% fresh and only bottle the rest for gifts and to lay down. Of course it should still be a stable wine but if not and problems arise the cuvee could still be reworked or blended with little difficulty.

Now back to my original notes:

When to bottle:

When the wine is stable and after blending, analysis and final filtration. White and rosé wines should be bottled in the summer after harvest. Red wines can also be bottled then or aged to acquire more complexity. Wines should be held for a week or 2 after final filtration and be allowed to rest before bottling.

Sulfites before bottling:

I would have the cuvee analyzed about 2 weeks before bottling to check sulfite levels and would like to have white and rosé levels at about 25 ppm and red wines at about 20 ppm for stability. I would also test for Ph, acidity, total SO₂, VA and alcohol.

All wines were also tested for completion of malolactic fermentation.

Filtration

Chardonnay and rosé were filtered after the 1st racking with seitz k700 pads (5-7 microns) .The second filtration would be 2 of 3 weeks before bottling with seitz k200 (1 micron) and EK 1 (.45 microns) pads.

Bottles

As a commercial winemaker I always used new bottles except for the 1st bottling of '97 zinfandel when I used used cleaned and sterilized bottles from encore. A mistake because many were scratched and were slightly different colors and shapes. Not a good presentation on a store shelf but could be a useful resource for a home winemaker. As a home winemaker I saved and scrounged used bottles, removing labels, cleaning with TSP, rinsing and just before reusing would spritz with strong SO₂ solution. A lot of work!

Corks

At first I used corks from a small supplier but found an unacceptable level of cork taint. I came to suspect that I was sold corks that were from lots that had been rejected by the larger producers. Then I went to Amorim, a large, vertically integrated producer and the cork taint went to less than 1%. For chardonnay and rosé I used their "twin top" agglomerated corks with 1/16" slices of cork on the ends at \$100/M and for red wines I would use a much better quality cork at \$330/M. They were supplied in sealed gassed bags of 1000.

Home winemakers usually will not have a corker that will pull a vacuum as the cork is inserted so the bottles should be placed upright in the case after bottling and then turned over after 3 days to allow the compressed air to escape and the cork to seal.

Capsules

Their original purpose may have been to protect the cork from cork boring beetles or larvae but now they provide a tamper evident seal for commercial purposes.

Head space should be ½", +/- 1/8".

Bottled wines should be allowed to rest for a least a month to allow bottle shock to dissipate.

Sparging

As a home winemaker I would sanitize the bottles with a strong so₂ solution just before bottling. When I went commercial and used only new glass I would sparge the bottles as part of the bottling line. I built the sparging device from parts from Graingers for about \$30.