



# BREW-IT STORE

WINE CRAFTING



## Tip of the Month: Cellar Planning

One thing that books and courses on winemaking never seem to teach is how to build up a good cellar of home-made wine. If you're like most home winemakers, you always seem to be drinking the last bottle of your batch just as it's really perfectly aged.

1. Determine how much wine you use. This includes your daily glasses with dinner, weekend dinner parties, friends dropping by, birthdays, anniversaries, the holiday weekend, house warming presents, your thirsty brother-in-law, etc. Let's say that comes to about three bottles per week, all together. Split it up as per your preference for red and white (don't forget pink, dessert, and champagne as well).
2. Multiply your weekly consumption by 52, in this case, getting 156.
3. Add 15-20% for unexpected wine emergencies (there will be one). In this case 25 or 30 bottles. We'll round the total to 180 bottles. That works out to six 23-litre (5-gallon) batches per year.
4. Make twice your yearly expected consumption, in as short a period as possible, ideally all within one or two months. This is 12 batches, all in one fell swoop.
5. Put half of the wine away in your cellar, and forget about it. Drink your young wine, as you need it.
6. At the end of one year start opening those fully aged bottles, and enjoy the tremendous improvement that good cellaring can bring. On the anniversary date of your big batch, make another six batches, all at once, and put them to the back of the cellar. In a year you'll nearly dislocate your shoulder patting yourself on the back.

The problem with this is, while it is very rewarding, you need both the space and the cash to make 12 batches of wine all at once.

If you can't quite swing it, another good strategy is to make two batches of everything, every time you make wine. Bottle one for your use, and put the other in the cellar (away from the prying corkscrew of your thirsty brother-in-law!) Try and stay on a regular schedule to maximize your use of equipment: idle carboys are nobody's playground. Over the course of a year you should be able to get at least three or four batches salted away for ageing, making a good start on your cellar.

## RJS Tech Tip

### Wine Diamonds, Metatartaric Acid & Cold Stabilization

This information bulletin is for the benefit of our customers with questions about “wine diamonds” or “bitartrate crystals”.

Grapes naturally contain several organic acids including tartaric acid (*wine acid* in German). They also contain potassium and calcium ions which can form salts with these natural organic acids.

As you are already aware, these salts can precipitate out of the wine to form a material called **potassium (calcium) bitartrate**. These are a clear (or sometimes red or brown), crystalline material. They are also referred to as “**wine diamonds**,” but vintners also call them “**tartrates**”.

These bitartrate salts have several interesting physical properties:

- In the unfermented grape juice only little can be dissolved.
- Even less is soluble in the juice (wine then) after fermentation, since alcohol can dissolve less of it.
- The quantity of potassium bitartrate dissolved in wine is also strongly temperature dependent, cold wine cannot hold as much bitartrate as warm wine, hence even more tartrates will drop out.

In combination, these three properties produce an interesting winemaking problem. Generally, grape juice contains all the bitartrate it can hold when the grapes are picked. Alcohol begins to accumulate when the grapes are fermented. As the alcohol concentration increases, the new wine becomes saturated, and tartrate precipitates out of the wine. As fermentation continues, more alcohol is produced, and more tartrate is forced to precipitate out of wine. By the end of fermentation, the new wine is over-saturated with tartrates and they can continue to drop out of the solution, at normal cellar temperatures, for a year or more.

As tartrate drops out of solution, suspicious looking crystals or dense sediments are formed in the bottle. Tartrate sediments are unsightly and are sometimes mistaken for glass particles, however, they are in no way harmful nor do they spoil the wine.

When a wine kit contains more juice, chances of acid instability is higher. So we regard a tartrate dropout more of a sign of quality than a problem or an issue.

There are two possible solutions to manage “wine diamonds” for consumers - the first is **cold** stabilization, commercial wineries cold stabilize their wines. Cold stabilization is the process of chilling wine prior to bottling in order to hasten the crystallization and precipitation of potassium bitartrate and thereby prevent “wine diamonds” from forming in the bottle. To cold stabilize place wine in carboy in fridge until crystals form (this can take anywhere from 5 days to 1 month). Rack wine off crystals while wine is still cold, as warmer temperatures will cause bitartrate crystals to dissolve back into suspension. Although this works for potassium bitartrate, the more stable Calcium bitartrate is less effected by temperature it can occur even in the best cold stabilized wines.

The second solution is the use of **Metatartaric Acid** – included in all En Primeur wine kits. Metatartaric Acid will temporarily prevent the formation of crystals of potassium tartrate from saturated young wines. This is not a permanent solution, reaction depends on the storage period of the wine and on the storage temperature. It has been our experience at RJ Spagnols that these wines will be stable and free of wine diamonds for one year. However, if the wine is stored in cold temperatures (like in the refrigerator) that will effectively be the same as “cold stabilizing” and can cause wine diamonds to drop out.

If you have further questions please contact a member of the RJ Spagnols sales team.