

# Fining

## (What, When, and Why...)

**Q: What is fining? When should it be used and how?**

**A:** Most wines [meads & ciders] **will clarify on their own given enough time** and appropriate rackings, but occasionally one won't. The problem could be pectin or starch haze, or perhaps a metallic contamination from using copper, zinc, iron, or aluminum utensils. Problems such as these have their own remedies. Sometimes, however, the cause of cloudiness is simply very finely suspended particles of the material from which the wine is made, or it may be excessive tannin or suspended dead yeast cells. These too will clear up over time as the particulates settle out into lees, but perhaps at the cost of adding off-flavors to the wine.

If your wine has not naturally cleared after three rackings 60 days apart, try putting it in a colder place--not necessarily in a refrigerator. A drop of 10°F will often cause a wine to begin clarifying, but not if the wine was over-heated to begin with. Wine should generally be fermented at 60-70 °F. It is from this range that a 10° drop will often produce results. If this does not work after 30 days and you have ruled out pectic and starch hazes, give it more time or try a fining agent. A fining agent is a material added to wine that settles by gravity, dragging down with it particulates one wishes to remove from the wine. The addition of a fining agent to the wine will usually clarify it. If it doesn't, something else--most likely, a bacteria infestation--is the culprit and you should seriously consider dumping the batch down the drain. Filtering will also clarify many wines, but filtering can definitely alter the taste and character of the wine and for that reason, I do not usually recommend filtering.

There are many fining agents--some good and some better. All tend to change the taste of the wine somewhat, even if only slightly, and for that reason you should only use fining agents if you absolutely have to. But before we look at some of the various fining agents available, let's first look at how fining agents work.

**The purpose of fining is to remove suspended particles from a wine that are causing problems now or could cause problems in the future.** Many of the **unwanted suspended particles in wine possess either a positive (+) or a negative (-) electrical charge** while in a low pH, colloidal state. Therefore, **it is possible to precipitate these particles by introducing materials which will have an opposite electrical charge** when in the wine. When such particles are introduced into the must they are attracted to and combine with the oppositely charged suspended particles already in the wine. The result is relatively large and massive combined particles, usually with a neutral charge (the positive and negative charges having cancelled each other), that readily precipitate in the wine and even drag other suspended material with them as they fall. This is the theory, anyway.

- The **most common positively charged (+) particulate is protein**, although some metallic compounds also carry positive charges. Protein is easily removed using negatively charged (-) fining agents such as tannin, yeast, bentonite, and Kieselsol.
- There are, however, **numerous negatively charged particulates**, including **tannin**, phenolics, anthocyanins, **yeast**, and bacteria. These are removed using positively charged fining agents such as gelatin, albumin, casein, Isinglass, chitin (Chitosan), and **Sparkolloid**.

Just a cursory look at these groupings should lead to the realization that red wines, with their natural (or added) tannin, should not suffer from haze caused by proteins, but white wines easily could. This is why commercial white wines are routinely protein stabilized with bentonite fining and red wines are not. Young red wines, when cloudy at all, usually can trace their cloudiness to pectin or a negatively charged particulate.

### **Both temperature and wine pH affect the fining process:**

- The precipitation of the large, combined particles will be **hastened at low temperatures** and slowed at warmer temperatures. Thus, if possible, wine should be fined in the winter or at least chilled or cooled prior to fining.
- As the pH of a wine increases, the strength of the relative charge of suspended particles decreases. For example, at a high pH, organic protein fining agents may not have enough of a positive charge to sufficiently bind with the negatively charged particulates. Thus, they may actually increase the turbidity of the wine when it is chilled or warmed. This effect is often called "overfining" and naturally should be avoided. In the case of a high pH wine, Sparkolloid (with its pH-independent strong positive charge) should be used.
- **Highest Note: Sparkolloid** is my choice of fining agent for mead – see my FAQ on this topic.

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Here are some links to pages that discuss the types & use of various fining agents:

- 1) *The Winemaking Home Page*, <http://winemaking.jackkeller.net/finishin.asp>
- 2) *The Winemaker's Warehouse*, [http://www.winemakerswarehouse.com/fining\\_facts\\_glossary.htm](http://www.winemakerswarehouse.com/fining_facts_glossary.htm)
- 3) *Brewery Lane*, <http://www.brewerylane.com/finings.html>

Ref: Jack Keller's, *The Winemaking Home Page*, <http://winemaking.jackkeller.net>

A Hightest FAQ  
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