



## Wine Making and Fermentation Practices –What’s Really in Your Wine?

by Julie Wallace

Most wine drinkers carry the concept that wine is organic by default. Wine grapes are harvested at their peak, crushed into fermentation vats, and after a few months....voila ....we have wine.

Basically, that is what happens, but that process has been modernized, and products (other than grapes and yeast) might be used in creating a consistent wine product.

The largest health concern for wine drinkers should be the fact that synthetic pesticides, herbicides, and fertilizers stay in wine. They are absorbed by the vines and into the fruit, and then you consume these chemicals with every glass you drink. Just as we are becoming more informed about the food we eat by the incredible increases in organic food and beverage sales, so too, should we be concerned about the quality of the fruit that is used to produce wine.

Apart from the fact that conventional vineyards spray synthetic chemicals to combat disease and pestilence in the vineyard, many other strange things are added to the juice on its journey to becoming wine. Did you know that malic acid, egg whites, bentonite clay, milk, or animal and vegetable gelatin might be in your wine? Currently there is no regulation from the Canadian Food Inspection Agency (or any other country) to provide labeling of these items on a wine bottle. If you are vegetarian or vegan, you must be very surprised by this.

The most common and controversial additive is Sulfur Dioxide, or sulfites. Sulfites occur naturally during the fermentation of wine. Most people blame their headaches on sulfites, when actually they may be having a histamine reaction (from the red grape skins), or a reaction to the pesticides and herbicides and other chemicals that were used in the growing and producing of the grapes. Those with true allergic reactions to sulfur are numbered in the miniscule in the population. If you are able to eat onions, garlic, or dried fruit, then you are not allergic to sulfites.

There is no such thing as a sulfite-free wine, but there are a few wineries that are committed to producing wine with “No Added Sulfites”. Wines with no added sulfites likely contain 10ppm to 20 ppm of naturally occurring sulfites. Conventional wines can have from 150 ppm to 350 ppm of sulfites. Wine made from organically grown grapes may have added sulfites but not likely to exceed 40 ppm.

Wine makers committed to producing a “clean” product from organically grown grapes are not interested in contaminating their wine. Sulfites are added as a preservative so the wine does not oxidize in the bottle, and will be more stable over time. Wine is a living, breathing thing, and it can be affected by air, bacteria, and temperature. Most wine that is made from organically grown grapes has added sulfites and that *may* be labeled on the bottle. If the wine comes from the US, it will be labeled “added sulfites” but Canadian wine is not required to have such a label. So when you are shopping for wine, don’t be fooled that your favourite Canadian or European wine has no added sulfites....it does, unless the label clearly states....”no added sulfites”.

Added Sulfites can be significantly reduced or eliminated if screwcaps are used instead of corks. Corks contain bacteria (if it is not sterilized out) and allow air to permeate into the bottle. Screwcaps reduce “corkage” and also reduce the need to add large amounts of sulfites to stabilize the wine. (See article below).

What do egg whites have to do with wine making? Unbeknownst to the majority of wine drinkers, wine is clarified, or fined, to remove particles and sediment from the wine after fermentation. The proteins in egg whites bind with the particles in the wine and sink to the bottom of the tank. The wine is pumped off, and the egg whites and sediment remain in the tank. Bentonite clay, and gelatin are also used for the same purpose. Neither of these added products affects the taste of the wine, but their addition may be of concern for those who are vegetarian or vegan. The gelatin may be vegetable or animal sourced....again this is not required on the label of a wine bottle. Some wines may even be left without clarifying and labeled “unfiltered”.

Every now and then, you’ll be reading the back label of a wine bottle and you’ll read “malolactic fermentation”, and wonder what the heck that is. Malic acid is added to wine after the initial fermentation to help reduce the tannins and soften the texture of the wine. It is a naturally sourced product and is not chemical or harmful. Think of the acidity in apples as that is a source of malic acid.