

Sulphur and natural wines

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One of the natural wine topics that seems to excite discussion and arouse passions more than most others is the role of sulphur in winemaking. Sulphur is widely used in Australian wines both as a preservative and to kill off natural yeasts that are on the grapes and in the air at harvest time. Winemakers do this so that they can ensure that fermentation is only carried out by the commercial yeasts that they inject into the must to control the fermentation process.

Sulphur has been used in winemaking for a very long time with reports that the Romans used to burn sulphur candles in barrels so that the wine would be better preserved. While the authenticity of this claim is open to question there is written evidence that sulphur was used in barrels in Germany in the late 15th century¹.

In natural winemaking sulphur additions are usually kept to a minimum and many use none in the winemaking process or at bottling.

However there will always still be some sulphur in the wine as the production of sulphur compounds is a natural part of the winemaking process.

So what is our view on the use of sulphur and can a wine with added sulphur be called a natural wine?

Sulphur is used for two purposes in winemaking as we mentioned in the opening paragraph. The first is that it is used as an anti-microbial agent killing off yeasts and bacteria on the harvested grapes.

We don't like the dousing of grapes in sulphur after harvest to kill off naturally-occurring yeasts because we firmly believe that naturally fermented wines more clearly reflect the local terroir than those wines that rely on commercial yeasts which often add foreign flavours and aromas.

We particularly notice this effect when manufactured yeasts such as 71B are used to ferment the Gamay grape, especially in the Beaujolais region of France. The result is the production of aromas such as banana and candy which diminish the wines made this way. If you have drunk the wines of Foillard or Lapierre or Jean-Paul Brun where only natural yeasts are used to ferment the wines then none of these aromas exist, only the bold exciting aromas of the Gamay grape.

So we don't like this first use of sulphur in the winemaking process as it means that natural fermentation is less likely to occur.

Sulphur is also a preservative and a little sulphur added to the bottle can help preserve the freshness of the wine, particularly in white wines. We would prefer a winemaker

¹ The use of sulphur dioxide in Wine by Richard Gawel

who is uncertain about the preservation of the wine to use some sulphur as a preservative in the bottle rather than letting it spoil.

The best results, however, come when the winemaker learns to control the winemaking process in such a way that they do not need to add sulphur to preserve it.

As far as we can tell, Chauvet (one of the intellectual forces behind the natural wine movement) never espoused not using sulphur to preserve wine once it is in the bottle. However most natural wine proponents prefer to keep the level of sulphur very low to ensure that the freshness and vibrancy of the fruit flavours shine through. Some add none at all.

We sell a number of natural wines where no sulphur has been added. Examples are the Point Barre from Philippe Bornard – a wonderfully vibrant and delicious wine that is as fresh as the day it was bottled. We also love the Pivoine from Hervé Villemade, a blend of Cot (Malbec) and Gamay. Another very special wine that we love is the Henri Milan Sans Soufre Ajouté Rouge. This is a stunning red wine where the brilliance of the winemaking overcomes the necessity to add sulphur.

The wines mentioned above are examples where no sulphur at all has been added. However all of our wine makers are judicious in the addition of sulphur. Most of them use a little in the bottle but at very low levels – levels that are a fraction of the sulphur added in Australia or the United States.

For example, in the United States it is permitted to add up to 350 mg per litre to white wines – an enormous amount compared to the 10-20 mg per litre that are commonplace in many natural wines.

However there are other views. The respected winemaker from California, Paul Draper in a thoughtful piece published on Alice Feiring's Web site addresses a number of issues relating to natural fermentation (the subject of a future article) and the use of sulphur. In this article he claims that without the use of sulphur a wine cannot truly reflect its terroir.

While he does not make it entirely clear why, others have said, on his behalf, that it is because sulphur binds any acetaldehyde (which is a by-product of the fermentation process) in the wine which might otherwise mask the expression of terroir and give a sherry-like aroma to the wine.

Well, we can only comment that we have on a number of occasions tried exactly the same wine with low levels of added sulphur (around 20 mg per litre) and the same wine without any added sulphur and the no-sulphur version is invariably livelier and more expressive.

So we are happy to call a wine with low levels of sulphur (say, 0-30 mg per litre) a natural wine because this amount could occur naturally. However once the figure gets higher then we have reservations.