



WORDS CLIVE HARTLEY

ADDITIVES PLAY THEIR PART

CONCERN over additives and possible allergens in wine is one reason why we have witnessed the rise of “natural” or organic wines. All Australian wines must carry a declaration if they contain traces of any allergenic substances. Australia was the first country to adopt allergen labelling for foods in 2002. The right of the public to know what is in their food or drink is paramount, but considering we have such a highly technologically developed industry we shouldn't be overly concerned. But still, it can be a bit off putting to read that your favourite tippie has trace elements of milk, nuts, egg or fish products in them.

Additives to wine are there for a reason and have a role to play in making a

a gentle treatment. Egg whites are one of the most ancient protein fining materials and can be used fresh or powdered. Used with red wines, up to five whites are poured into a barrique size cask of 225 litres, and the surplus egg yolk explains why we have so many rich desserts and pastry items in France.

Fish was on the allergen list until it was taken off in 2009. This refers to the use of isinglass used in the fining process to clarify the wine and remove unwanted phenolics and tannins. It is made from the swim bladder of certain fish, traditionally the sturgeon. Finally, what is this nut business about? By law we are able to add tannins derived not only from grapes or oak, as is commonly the case, but chestnuts.

(parmesan and blue cheese especially), salami and some fish products.

Alcohol itself can cause an allergic reaction. People who suffer from rosacea, a reddening of the face, are at an increased risk. Alcohol causes the blood vessels to open up and allows more blood to flow through them which results in a reddening of the skin. Some people simply cannot process too much alcohol and the amount you can consume usually decreases as you get older. If you do get a reaction then try drinking lower alcohol wines such as off-dry style riesling or lighter, cool-climate style reds. Start choosing your wines by looking at the percentages on the label. Increasingly winemakers are trying to reduce their levels and I'm seeing a trickle

Almost all wines contain sulphites, it actually occurs naturally during the fermentation process.

sound and trustworthy bottle of wine. Preservatives are listed in a number of disguises such as codes to offset the alarm that might be caused by their chemical name. Unfortunately the additives give rise to potential allergens. The ones that have been identified in wine, and requiring labelling, are: sulphites, casein and potassium caseinate, egg whites, milk, evaporated milk and nuts.

Allergic reactions can be caused by a number of chemical compounds found in wine. The more common are derived from proteins. Traces of these proteins can be from the remnants of yeast or fining agents used to clarify and stabilise the wine. Casein is milk protein which can be added to white wine, especially if it needs a colour correction or bitterness removed. Skimmed milk is similarly used and is more

An allergic reaction could possibly occur from the presence of histamine and tyramine in wine. These two biogenic amines are common in red wines and according to Jancis Robinson's Oxford Companion to Wine they are thought to be produced during the malolactic fermentation process. So, oak matured red wines can be said to have higher levels of histamines. In both an Austrian (2010) and US study (1998), pinot noir was found to have higher levels of histamines than other red varieties. And in the Austrian study they discovered the higher the quality of wine the higher levels of histamines, presumably due to the increase in new oak being used in its maturation. A mild reaction to histamine can cause nasal congestion or itchy, flushed skin. But wine has less amine levels than a lot of other foods. Higher levels are found in strawberries, cheese

of 12.5 per cent reds coming through.

The additive sulphur dioxide is the most common and traditional preservative and used throughout the wine making process. It is principally an antioxidant and protects the wine from bacteria spoilage which can turn the wine to vinegar. But it can cause an allergic reaction in some drinkers, especially those prone to asthma. The code for sulphur dioxide is 220 and terms such as “contains sulphites” are also used. White wines are more delicate and need protection from oxidation more than red wines so whites are given a higher dose of SO₂ than reds. By law Australian table wine can contain up to 250mg/l of SO₂, while sweet wines such as botrytis semillon, have even higher levels.

Almost all wines contain sulphites, it actually occurs naturally during the fermentation process. Some producers will

say they keep their additions to a minimum. Mudgee winemaker and recent winner of the Legends of the Vine, David Lowe, knows all about sulphites. A mild asthma sufferer, he wanted to develop a preservative-free wine, however his old university lecturers told him it couldn't be done. Today one of his most successful wines is his Preservative Free Merlot. Making this wine has its challenges. After it has undergone a quick malolactic fermentation he keeps the wine cool at 5C which is uncommon for a red. The wine needs careful filtering down to 0.45 micron so no bugs can attack the wine when in bottle. Lowe continues: "The additional challenge is setting the fill height on the bottle since the greater the ullage the more air, faster ageing and less freshness; yet if it is filled too full and is stored in a warm climate it will expand and spill out of the capsule."

I asked him why he picks his grapes at lower sugar levels to give less alcohol when making a preservative-free red wine. "It's a pH argument, as early harvest means the wine is more reductive and less oxidative chemically, therefore it is more resistant to change. If you have higher alcohol it gives more microbial stability, but the pH is higher so more bad bugs grow in the wine medium." Which sounds like the lesser of two evils to me and the low pH wins out. In other words, the higher acid level (low pH) in the wine is protecting the wine and doing the job of the sulphur. This is what happens in the cooler climates of Europe where both red and white wines have more acidity and less alcohol.

Other preservatives include 224 the code for potassium metabisulphite (PMS) which is used as a solution to hinder spoilage and plays a similar role to sulphur dioxide. The code 200 is scorbic acid, a yeast inhibitor and used with wines that may be prone to yeast spoilage.