What happens when wine gets hot

29 May 2012 by Jancis Robinson

Vinexpo Asia-Pacific opens today and runs for three hot and humid days in Hong Kong. The exhibition centre and the restaurants where all those fine wines will be consumed will be heavily air conditioned of course, but many a wine bottle in the Asia-Pacific region will have been exposed to decidedly uncomfortable, not to say dangerous, temperatures according to this short, if hardly impartial, speech given by Eric Vogt, CEO of eProvenance, whose fine wine monitoring technology was first mentioned on this site in What happens to your wine en route? over four years ago.

The image shows eProvenance's second-generation RFID sensor that they insert in fine wine shipments to monitor physical conditions during shipment and storage. Vogt has been trying to persuade producers and merchants to take up his technology and you can see who has taken the financial plunge here.

Hong Kong is a hot market for wine. Hot because it is large and growing. And hot because summer temperatures climb above 30 °C on a daily basis. Heat is a quiet killer of fine wine. At just 28 °C, the cork seal breaks, pumping fresh oxygen into the headspace.

Above 30 °C, in less than 18 hours, the aroma oxidises and loses its brightness, the colour browns, the sulphur dioxide drops, and there is permanent chemical damage to the wine. At 39 °C this damage occurs in just six hours!

Much of this damage occurs silently, well before the wine seeps out of the cork as a telltale sign. The only indication of this damage is that when the consumer drinks it she says, 'I cannot believe Parker gave this 95 points and my supplier highly recommended it! I trusted him!' The brand loses value, and you lose a customer.

How large is this problem in Asia? Based upon the data we have collected on actual shipments from France and London to Hong Kong, 60% of cases exceeded 28 °C during their journey! To mainland China 41%; to Singapore 22%; to Japan 14%. The cold chain to Hong Kong and mainland China is broken.

'Use reefer containers,' some say. 'Use air freight,' others say. That does not solve the problem. These data come from reefer container and air freight shipments! The problem is the not the reefer container, but the unpredictable handling through the chain.

The only way to assure quality, to reassure your customers, and ensure the high value of fine wine in this 'hot market' is to monitor the shipment and storage temperatures, and provide the quality data to your customers. This builds your reputation and your marketing advantage. This builds the brand of the wine. This builds confidence in your cold chain, and this builds the resale value of the fine wine.

It is simple and inexpensive. At eProvenance we have a global system that can monitor the temperature of a case in transit from Europe to Asia and provide the electronic pedigree for less than 30 euros. We can monitor temperature and humidity for 15 years for less than 60 euros! And we have a brand new system which can report the temperature, humidity and geo-location of a pallet of fine wine in real time for less than 300 euros. That is 0.5 euros per bottle to both ensure quality and figure out where on earth is your wine right now! I think your customer deserves this modest investment.