



On the scent of wine that never goes off

- 1 WINES could be prevented from going off after scientists discovered an additive that prevents oxidation. The researchers added chelation compounds that bind with metals to inhibit oxidation. Gal Kreitman, a doctoral candidate in food science at Penn State University in the United States, said: "Oxidation has several bad effects on wine, such as discolouration and a loss of aroma. It can cause browning, as well as the loss of fruity characteristics, something that is much more noticeable in white wines."
- 2 Oxygen usually enters wine through the cork and interacts with metals, particularly iron, setting off a chain reaction that changes compounds that add particular and often disagreeable tastes and smells to the drink, according to the researchers, whose findings were published in the *Journal of Agricultural and Food Chemistry*.
- 3 Winemakers have previously attempted to control oxidation in the wine by stripping out the metals, which are acquired through the soil and from the grape. However, Mr Kreitman said those processes were impractical and expensive. He added: "Unfortunately, the process to remove the metals can strip colour and flavor compounds from the wine and processes like ion exchange can end up making the wine taste more salty." He said further research would be needed to find chelators that are food safe and approved for use by winemakers.

adapted from *The Daily Telegraph*, 2013

Tekst 9 On the scent of wine that never goes off

- “scientists discovered an additive” (eerste zin alinea 1)
- 1p 37 In welke zin wordt gerefereerd aan de nadelen van deze toevoeging? Citeer de eerste twee woorden van deze zin.
- 1p 38 Which of the following is in line with the first paragraph?
- A Chelation compounds enhance the ability to identify odours and flavours in wine.
 - B Removing small metal elements from wine will result in higher production.
 - C Researchers have discovered how to cultivate the taste for white wine.
 - D The new additive reduces the problems resulting from the process of oxidation.
- 1p 39 Welk voordeel heeft zwaveldioxide (SO₂) ten opzichte van chelatoren volgens Johnblood27?

Johnblood27 wrote:

25-Nov-2013 at 20:16:19 (GMT)

Use of chelation to bind iron and reduce oxidative damage to wines is all well and good, but sulfur dioxide is used for more than oxidation control.

The property of microbial inhibition by the "molecular" SO₂ level and subsequent wine preservation would be compromised.

With the non-sterile nature of wine production the removal of SO₂ from the process would increase the microbial risk of spoilage in bottled wines substantially.

I would caution against too much celebration of wine oxidative damage being solved by chelation.

<http://www.wine-searcher.com/m/2013/11/science-serves-up-a-sulfur-substitute>

Bronvermelding

Een opsomming van de in dit examen gebruikte bronnen, zoals teksten en afbeeldingen, is te vinden in het bij dit examen behorende correctievoorschrift, dat na afloop van het examen wordt gepubliceerd.