

# Is too much sunshine ruining your picnics and barbeques? Make 21st June Light Strike Awareness Day!

Submitted by: Plumpton College

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Plumpton College, Champagne Sparkling Wine World Championships and Nyetimber

Summer solstice is the longest day of the year, but is all this sunshine ruining the wines, ciders and beers that we enjoy at picnics, barbeques and other outdoor events?

The famous Italian scientist Galileo Galilei is famously quoted as saying “Wine is sunlight, held together by water”, but, once the grapes are picked, light becomes the enemy of wine. In the winery, winemakers keep it in the dark: inside tanks, barrels and underground cellars. Only once the wine is bottled does it come back into the light, and this can ruin wine in less than an hour.

Light strike taint or Goût de Lumière occurs when ultraviolet and visible light react with the amino acids in the wine to transform them into unpleasant sulphide compounds. Wine can quickly develop a taste reminiscent of dishwater, old potatoes, cardboard and cabbage when exposed to sunshine. At Plumpton College, the UK centre of excellence in wine education, training and research, the topic of light strike has been on the syllabus for many years, and all wine graduates have a clear understanding of the risks involved. However, the broader wine trade and general public remain oblivious to this problem. So, this summer solstice, Plumpton College, in conjunction with the Champagne and Sparkling Wine World Championship (CSWWC) and leading UK Winery Nyetimber, are launching the inaugural “light strike awareness day”. The aim of the day is to bring the problem of light strike to everyone’s attention, and to outline the simple steps that can be taken to prevent wine from being irreversibly damaged.

Light strike taints can start to develop as soon as the wine bottle is removed from its cardboard box. Tom Stevenson, the UK sparkling wine expert and founder of the CSWWC, conducted the world’s first practical demonstration of growing light-struck aromas against unaffected samples of the same wine at the International Sparkling Wine Symposium in 2013. He states “Clear glass is most commonly used for Rosé and Blanc de Blancs styles. Producers always blame the marketing people for demanding clear glass bottles and whereas this might be true, it is fundamentally a quality control issue, and for the sake of longterm reputation, no self-respecting producer should allow marketing to overrule quality control. They should switch to dark glass bottles, tick the box and move on. English sparkling wine is ahead of the game, as is Trentodoc, but Champagne lags behind. All the clear glass bottles in my cellar have always been double-bagged in black plastic and since I introduced this safeguard at the CSWWC in 2015, the instance of faulty bottles has dropped by 94%. Why other competitions have not followed suit when the science of light struck aromas is known and the remedy is so cheap and easy to deploy, I cannot imagine. Perhaps they don’t care?”

UK winemakers are also helping, by moving away from colourless and light coloured glass to darker green and brown bottles. Brad Greatrix, winemaker for Nyetimber is passionate about the topic of light strike.

“We do as much as we can to raise awareness of light strike. Every year a lot of perfectly good wine is spoiled because it is stored in clear bottles and exposed to sunlight or the wrong type of indoor lighting. At Nyetimber we’ve been filling our wines into dark amber bottles since the 2009 vintage to

protect against these exposures. Once one learns to recognise the sulphury smell of a light affected bottle, you'll be amazed at how prevalent it is in wines filled into transparent packaging!"

Tony Milonowski, Lecturer in Oenology at Plumpton College concluded "Education about light strike is the key defence to this wine problem. There are many opportunities for wineries, retailers and customers can take to reduce the damage to wine, it's an important to educate winemakers and those wanting to make a career in the wine industry about the issue. I hope on the longest day in the year we can get this important message out"

Still and sparkling rosé wines are the most commonly affected, as many winemakers still choose to showcase the pink colour of their wines through colourless glass.

As part of light strike awareness day, Plumpton College, Nyetimber and the CSWCC are urging the following groups to take action:

#### Winemakers

- Should package their wines in dark glass bottles, or use coloured wrap or individual cardboard containers.
- Ensure bottles are kept covered at all times in the winery, by using opaque shrink wrap on bins and stillages, or by placing wine immediately into cardboard boxes.
- Installing lighting that minimises damage to wine in the winery, bottling and storage areas.

#### Wine merchants, bars and restaurants

- Keep stock at risk of light strike away from direct light, including window displays.
- Change damaging lighting such as fluorescents tubes to more wine-friendly low energy bulbs.
- Stock wines from wineries who package their wine in dark glass.

#### Customers

- Keep wine at home in cardboard boxes and in cool dark locations.
- When enjoying wine outside, keep the wine away from direct light, or even better, wrap the bottle in aluminium foil.
- Choose wines packaged in dark glass.

#### Light strike: the facts

Most susceptible wine styles:

- Sparkling white and rosé, due to extended lees ageing
- Still white and rosé wine

Most damaging light

- Wavelengths below 510 nm, particularly between 370nm (UV) and 442nm (blue).
- Direct sunlight
- Fluorescent tubes, xenon and metal halide lamps in close proximity to wine

Most susceptible glass bottles:

- Colourless or flint glass
  - Blue coloured bottles
  - Light green coloured bottle
- Glass bottles providing greater protections

- Bottles with opaque coverings
- Dark brown bottles
- Amber bottles
- Dark green bottles

#### Key reactions

Light reacts with riboflavin (vitamin B2), naturally present in wine, which oxidises methionine (a sulphur-containing amino acid also present in wine) to form undesirable sulphur compounds such as dimethyl disulphide (aroma of rotting food, sewage) and methanethiol (smell of drains). Light may also react to form aldehydes (cooked vegetable odour) and degrade esters (fruit aromas)

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For Further Information please contact: Rachel Davey  
T:07725118093 E: rachel@racheldaveypr.co.uk