

Getting the most out of canned wine

AWRI

Kieran Hirlam¹, Denny Hsieh¹, Neil Scrimgeour¹, Eric Wilkes¹

¹The Australian Wine Research Institute, PO Box 197, Glen Osmond (Adelaide) SA 5064, Australia

Corresponding author's email: Kieran.Hirlam@awri.com.au

1. Background

- Canned wine was first released in 1935 in the US; however, the format has not been widely adopted
- The canned wine segment has seen exponential growth in the US market in recent years, with similar, albeit smaller, growth in Australia
- Consumers and producers have highlighted reduction issues in canned wines after as little as one to three months' shelf-life.
- Transition metals, such as copper (Cu) and aluminium (Al) speed up the formation of hydrogen sulfide, especially in a low-oxygen environment.
- Other risk factors for reductive characters include chloride, sulfur dioxide, sulfate and pH.

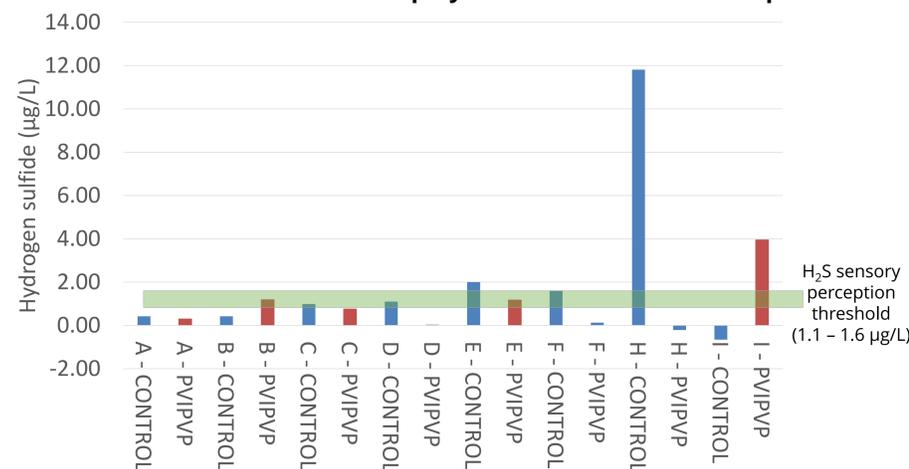
2. Bench-scale trials

- Nine wines from six producers
 - Sauvignon Blanc, Pinot Grigio, Prosecco and rosé
 - Control vs cross-linked polymer treated
 - All products pre-screened to determine presence or absence of certain risk factors
 - Packaging conducted under best-practice conditions
- Minimising risk factors in products pre-packaging decreases risk of reductive aromas
- Need to be aware of can-to-can variability and random lacquer application issues

3. Mitigation strategies and recommendations

- **Minimise risk of aluminium migration**
 - This is not a winery issue – work with can manufacturers to understand which cans/liners work and how different wine attributes affect aluminium migration
- **Remove copper using cross-linked polymers**
- **Reduce the amount of sulfur dioxide**
 - Ensure efficient microbial control of packaging line and effective oxygen management at packaging, to reduce oxidation risk
- **Reduce chloride levels**
 - Extra processing steps required

H₂S differences 3 months post-packaging comparing control and cross-linked polymer treated canned samples



Highest Cu = 0.2 mg/L
Free SO₂ elevated at 3 months

Canned wine risk factors

