

Vintage: 2016 | Variety: Merlot | Region: Riverland, South Australia

SUMMARY:

In 2016, Oak Solutions Group began a trial to determine the long-term color stability of its trū/tan f2 enological tannin. Samples for this trial were collected from a winery in the Riverland region of South Australia during the 2016 vintage. The objective of the trial was to compare trū/tan f2 enological tannin to a similar product from another leading fermentation tannin company, hereby referred to as Brand X, on key color indicators through aging.

This trial was conducted to collect data on the enduring, beneficial effect of trū/tan products on wine color. This data will be utilized to address customer inquiries on tannin stability.

DOSE RATE AND METHOD:

The dose rate used in the trial was based on the Brand X recommended dose rate, equalized for total tannin content. trū/tan products contain a higher level of tannin content should be dosed at a lower rate than Brand X to keep variables equal. For this trial, trū/tan f2 was dosed at 25 ppm and Brand X was dosed at 100 ppm. This is a relatively low addition rate for the trū/tan fermentation tannins used in red musts. A control was also included with no tannin added. Tannin additions were made pre-fermentation and all lots were treated similarly. All three variables were aged separately until the wines were bottled after 12 months of aging.

RESULTS:

The wines were initially analyzed at AWRI commercial services. The results are represented in the graphs as 2017. The data revealed trū/tan f2 to have superior color content, color stability, tannin content, and total phenolic content compared to the control and Brand X. In addition, Brand X had lower color and tannin indicators compared to trū/tan f2 and the control.

Samples were also sent out for tasting. In tasting trials trū/tan f2 wines were noted as fruitier with a softer palate, Brand X was described as a chalky tannin with some bitterness, and the control displayed more green characters.

Wines were left in bottle to age for an additional three years, at which point color analysis was performed again. The trend of trū/tan f2 superiority over Brand X and the control continued in all color and tannin indicators. It should be noted that the control with no tannin added performed better than Brand X.

EXPLANATION OF ANALYSES

- Color points are an accumulation of absorbance units from 420, 520, and 620 nanometers. All wavelengths in the visible spectrum are an indicator of total wine color.
- Color Hue is the ratio of the absorbance readings at 420 and 520 nanometers. This indicates a tendency towards red or yellow. A smaller hue number indicates more red, and a larger hue number means more yellow/brown color.
- Total anthocyanins is an extremely important indication of wine color. It is a sum measure of all the potential pigmented compounds in the wine in its current state.
- Polymeric anthocyanins is an indicator of long term, stable color. These molecules are more resistant to bleaching by sulfur and oxidative effects.
- Total phenolics is a measurement of the total tannin content in the wine. This is expressed in gallic acid equivalents and is an indicator of wine quality.

2016 Riverland Merlot Trial

Data Collected From ISCO Laboratory
Nov 2020

Color Content

Color Density	1mm path	420	520	620	color points	hue
Control - 2020		0.903	0.812	0.19	1.91	1.112
25ppm F2 - 2020		1.037	0.994	0.217	2.25	1.043
100ppm Brand X - 2020		0.884	0.815	0.182	1.88	1.085

Color Content

Total Anthocyanins	
Control - 2020	3.22
25ppm F2 - 2020	4.07
100ppm Brand X - 2020	3.34

Tannin Content

Total Phenolics	ppm
Control - 2020	0.88
25ppm F2 - 2020	1.18
100ppm Brand X - 2020	0.96

Color Stability

Co-pigmented Anthocyanins	
Control - 2020	2.44
25ppm F2 - 2020	3.10
100ppm Brand X - 2020	2.54

Color Stability

Polymeric Anthocyanin	
Control - 2020	2.22
25ppm F2 - 2020	2.92
100ppm Brand X - 2020	2.29

