

## Chemical and Sensory Properties of Chardonnay Wines Produced in Different Oak Barrels

**Authors :** Valentina Obradović, Josip Mesić, Maja Ergović Ravančić, Kamila Mijowska, Brankica Svitlica

**Abstract :** French oak and American oak barrels are most famous all over the world, but barrels of different origin can also be used for obtaining high quality wines. The aim of this research was to compare the influence of different Slavonian (Croatian) and French oak barrels on the quality of Chardonnay wine. Grapes were grown in Croatian wine growing region of Kutjevo in 2015. Chardonnay wines were tested for basic oenological parameters (alcohol, extract, reducing sugar, SO<sub>2</sub>, acidity), total polyphenols content (Folin-Ciocalteu method), antioxidant activity (ABTS and DPPH method) and color density. Sensory evaluation was performed by students of viticulture/oenology. Samples produced by classical fermentation and ageing in French oak barrels, had better results for polyphenols and sensory evaluation (especially low toasting level) than samples in Slavonian barrels. All tested samples were scored as a "quality" or "premium quality" wines. Sur lie method of fermentation and ageing in Slavonian oak barrel had very good extraction of polyphenols and high antioxidant activity with the usage of authentic yeasts, while commercial yeast strain resulted in worse chemical and sensory parameters.

**Keywords :** chardonnay, French oak, Slavonian oak, sur lie

**Conference Title :** ICFAB 2017 : International Conference on Food and Agricultural Biotechnology

**Conference Location :** New York, United States

**Conference Dates :** June 04-05, 2017