

## OPTIMIZATION OF COLLOIDAL STABILIZATION OF THE YOUNG WHITE WINES

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Heat-unstable soluble proteins present in grapes, grape juices and wines may become insoluble and precipitate causing the formation of undesirable hazes or deposits in white wines after bottling during the storage [1].

The bentonite is still universally employed in the wine industry to prevent the protein haze-forming in white wines. This material is montmorillonite clay, which contains exchangeable cations (sodium, calcium ions). Wine proteins are positively charged at wine pH, and thus can be exchanged onto bentonite (carriet negatively) [2].

Investigations have been conducted on two young wines obtained from *Chardonnay* and *Sauvignon Blanc* varieties of vintage 2014. The studied gluing agent to achieve stability of wine samples, was used: sodium bentonite, activated bentonite, and two different sodium calcium bentonites currently present in the marketplace. Stability was defined by a difference of less than 1 NTU between the control and the bentonite-treated wine.

Results indicate that the least amount of sodium bentonite and activated bentonite is needed to achieve heat stability in the *Chardonnay* and *Sauvignon Blanc* wines. These type of bentonite improve the winemaking process by providing an increased wine volume at a reduced overall cost.

### References:

1. Waters, E. and autres. *Preventing protein haze in bottled wine*. Aust. J. Grape and Wine Res., 2005, 11, 215 - 225.
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3. Sauvage, F. and autres. *Proteins in white wines: Thermo-sensitivity and differential adsorbtion by bentonite*. Food Chem., 2010, 118, (1), 26-34.