

Effect of Antioxidant Protection of Must on Volatile Compounds and Aroma Shelf Life of Falanghina (*Vitis vinifera* L.) Wine

LUIGI MOIO,* MAURIZIO UGLIANO, ALESSANDRO GENOVESE,
ANGELITA GAMBUTI, RITA PESSINA, AND PAOLA PIOMBINO

Dipartimento di Scienze degli Alimenti, Università degli Studi di Foggia,
Via Napoli 25, 71100 Foggia, Italy

Two vinification methods involving different degrees of antioxidant protection of Falanghina must during prefermentative steps, and referred as HAMP (high antioxidant must protection) and LAMP (low antioxidant must protection), were compared in terms of fermentation performances of four different yeast strains, composition of the volatile fraction of wines at the end of alcoholic fermentation, and shelf life of wines during storage. The use of HAMP technology resulted in wines with lower volatile acidity and higher concentrations of medium-chain fatty acid ethyl esters, acetates, and volatile fatty acids. For two of the four strains a lower concentration of isoamyl alcohol was also observed. HAMP wines also revealed increased shelf life because of the higher concentration of odor active esters at the end of storage and better preservation of varietal aromas.

KEYWORDS: Antioxidant protection; oxygen; fermentation performances; aroma compounds; shelf life

...