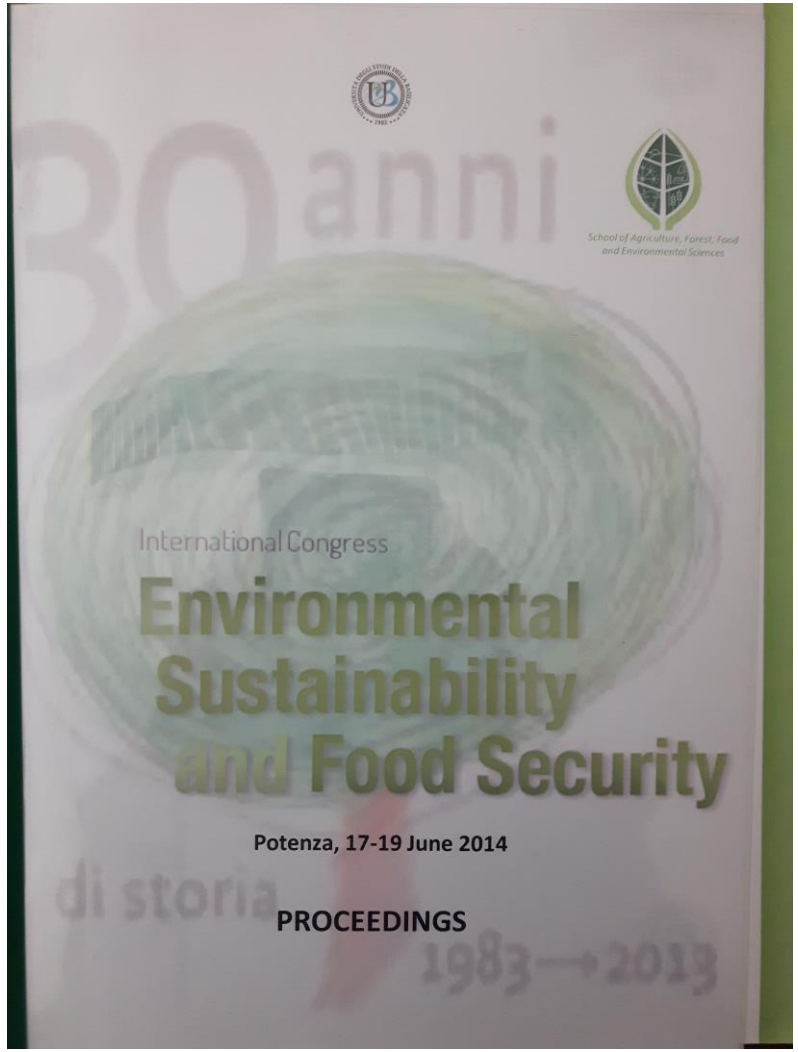

MANNOPROTEINS FROM NON-*SACCHAROMYCES* YEASTS: A NEW OPPORTUNITY TO IMPROVE WINE QUALITY

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The possibility to achieve a natural stabilization of wine protein and tartrate represents one of the main objectives for a winemaker. Although this goal could be reached by adding a commercial mannoprotein-rich preparation, these products, besides being expensive, may cause loss of wine red stable color. In contrast, mannoproteins naturally released by yeast during the alcoholic fermentation and wine aging processes, are a cheaper and natural source for this type of product. The mannoproteins have been recognized to have many other positive enological properties such as improving mouth feel and fullness, adding complexity and aromatic persistence, stimulate malolactic fermentation by lactic acid bacteria, adsorb some toxic compounds possibly present in the wine such as Ochratoxin A and improve the foam quality of sparkling wines. A range of 40-150 mg/L is normally the amount of mannoproteins released by *Saccharomyces* during the alcoholic fermentation. In contrast, some authors have shown that some non-*Saccharomyces* yeast strains, naturally present in the grape and winery environments, have a higher capacity to release polysaccharides into the wine during the alcoholic fermentation.

In the present work we used eight non-*Saccharomyces* yeast strains, already selected for their enological attributes in mixed fermentation in grape juice at the laboratory scale, to evaluate their ability to release mannoproteins during the alcoholic fermentation of a synthetic polysaccharide-free grape juice. All the strains showed a higher capacity to release mannoproteins compared to a commercial strain of *S. cerevisiae*. The analysis by mass spectrometry of the mannoproteins showed a variable degree of polymerization of the N-glycans released by PNGase F, with a mass spectrometric profile characteristic for each strain.