UNIVERSIDAD POLITÉCNICA DE MADRID

ESCUELA TÉCNICA SUPERIOR DE INGENIEROS AGRÓNOMOS

Dpto. Tecnología de Alimentos

Master de Viticultura y Enología

EMaVE CONSORTIUM

European Master of Viticulture and Enology

MASTER THESIS

Reduction of 4-ethylphenol concentration in red wines using yeast biomasses as bioadsorbent: influence in anthocyanin concentration and chromatic parameters.

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2. ABSTRACT

Brettanomyces/*Dekkera* development and their ability to produce significant amounts of 4-ethylphenol, may cause important organoleptic defects in affected wines. The bioabsorption capacity of *Saccharomyces cerevisiae G37* and *Schizosaccharomyces pombe 936* biomass for 4-ethylphenol, was studied with the purpose of diminishing the sensorial impact of this compound. Through SPME-GC/MS, UV-Vis and HPLC-PDAD/ESI-MS analysis, high correlations between the doses of biomass added, the decrease of 4-ethylphenol, anthocyanins and chromatic variables, were found. The two yeast species were found to be statistically equal for 4-ethylphenol absorption but different for some anthocyanins and chromatic variables.