

P025 Malolactic Fermentation by using *Oenococcus Oeni* Cells Immobilized on Delignified Cellulosic Materials in Wine Making
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Cells of *Oenococcus oeni* ATCC 23279 immobilized on delignified cellulosic materials (DCM) were used for malolactic fermentation (MLF) of wine. Eleven repeated fermentation batches were carried out using a psychrotolerant *S. cerevisiae* AXAZ-1 strain immobilized on DCM at 20 °C. Subsequently eleven repeated malolactic fermentation batches were carried out using a *O. oeni* strain immobilized on DCM at 27°C within a period of 1 month. As the repeated MLF batches proceeded, the MLF activity of the immobilized biocatalyst was reduced. Malic acid degradation was reduced from 67.4 to 40%. Acetic acid concentrations were reduced and higher alcohols (propanol-1, isobutyl alcohol and amyl alcohols) were slightly increased after malolactic fermentation. GC-MS analysis of wine samples before and after malolactic fermentation resulted some qualitative differences. Sensory evaluation ascertained the improved quality of the produced wine.