

ENZYMATIC OPTIMISATION OF AN ELECTROCHEMICAL SENSOR FOR WINES D- LACTATE ANALYSIS

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Abstract: In order to optimise the biological transducer of an electrochemical biosensor used for the analysis of D-lactate in wines, there were studied two electrochemical biorecognition elements for D-lactate: one based on D-lactate dehydrogenase (D-LDH)/nicotinamide dinucleotide (NAD⁺) and the other one, containing alanine aminotransferase (ALT) co-immobilised with D-LDH in a paste electrode, for the purpose to decrease the inhibitory effect of pyruvate (which results by D-lactate oxidising). The second sensor presents some improvements on the response to D-lactate.

Keywords: biosensor, D-lactate assay, wine, alanine aminotransferase

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