biosensors

MDPI

Article

Allosteric Enzyme-Based Biosensors—Kinetic Behaviours of Immobilised L-Lysine-α-Oxidase from *Trichoderma viride*: pH Influence and Allosteric Properties

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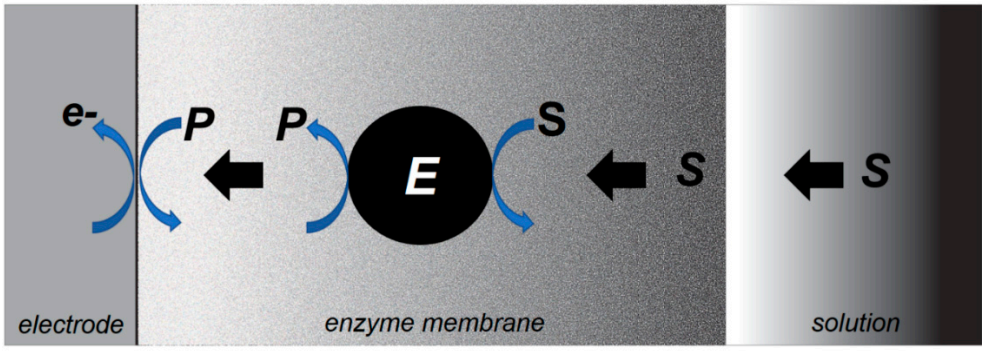
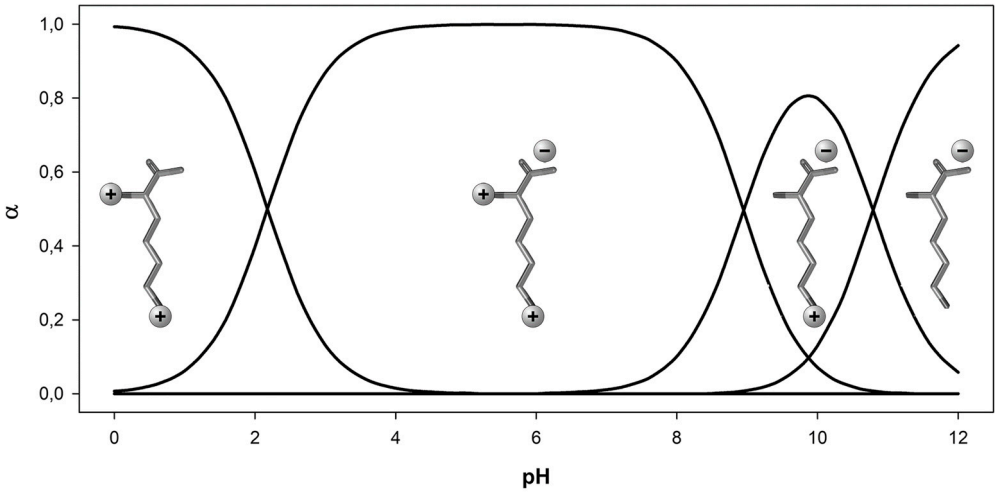
Supplementary Materials



Scheme S1. Kinetic scheme of an amperometric enzyme electrode (biosensor) showing (left to right) the electrode surface, the enzyme entrapping membrane and the substrate supplying solution. Straight arrows refer to the mass flow of substrate (S) and product (P) while curved arrows refer to the reaction with enzyme (E) and with electrode surface generating electrons (e^-). Shading refers to substrate concentration gradient in solution and membrane.



Scheme S2. Distribution diagram (*i.e.* dissociation degree **α** vs pH) for L-lysine species in solution. The dissociation degrees for each L-lysine species have been calculated assuming pK_a values of 2.2, 8.9 and 10.3.

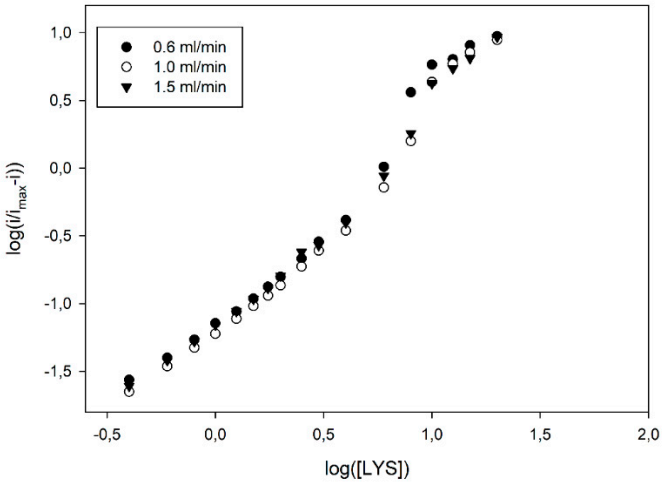


Figure S1. Hill plots of normalised current responses due to injections of L-lysine standard solutions at the amperometric enzyme electrode as a function of L-lysine concentration at pH 9 at different flow rates as pointed out in legend. Experimental conditions as described in Materials and Methods section.