

Effect of Cross-linkers on the activity of alcohol dehydrogenase immobilized on the polyaniline magnetic nanoparticles

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In this study, alcohol dehydrogenase(ADH) was immobilized on the polyaniline magnetic nanoparticles(PAMP). During the experiments, we found that using the glutaraldehyde as a cross-linker, no activity was found in ADH immobilized on the PAMP. However using EDC, immobilized enzyme shows great activities. The Kcat value of the free and immobilized enzyme were detected as 82, 3.4 mM/min/mg protein respectively. And immobilized enzyme shows a good property at the acidic solution. At the acidic condition, free ADH couldn't be activated, however, immobilized ADH shows more than 50% activities at pH 4.5.