

Catalytic carboxyester hydrolysis by diaminodiphenols

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Two diaminodiphenols, **1** and **2**, have been examined as catalysts for the hydrolysis of 4-nitrophenyl acetate (NA) and 4-nitrophenylphosphate (NP) in aqueous-acetonitrile (25% acetonitrile v/v) media at 35°C, $I = 1.0 \text{ mol dm}^{-3}$. The compound **1** enhances the hydrolysis rate of NA more than 10^5 times. Its catalytic efficiency is only 80 times less than that of the OH^- ion. Somewhat unexpectedly, addition of Cu^{2+} and Zn^{2+} strongly inhibit hydrolysis because the metal ions scavenge **1** by way of complex formation. In contrast to **1**, **2** shows poor catalytic activity towards the hydrolysis of NA. Neither **1** nor **2** catalyses the hydrolysis of NP. The reasons for the specificity of **1** as a hydrolytic catalyst for NA is under investigation through kinetic and equilibrium measurements in solution.

