



# Dioxygen activation with a cytochrome P450 model. Characterization and electrochemical study of new unsymmetrical tetradentate Schiff-base complexes with iron(III) and cobalt(II)

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Auteur	Ourari, Ali [1], Ouari, Kamel [2], Khan, Mustayeen Ahmed [3], Bouet, Gilles [4]
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Résumé en anglais	Salicylaldehyde or 5-bromosalicylaldehyde react with 2,3-diaminophenol to give two unsymmetrical Schiff-bases H2L1, H2L2, respectively. With Fe(III) and Co(II), these ligands lead to four complexes: Fe(III)ClL1, Fe(III)ClL2, Co(II)L1, Co(II)L2. The structures of these complexes were determined by mass spectroscopy, infrared and electronic spectra. Cyclic voltammetry in dimethylformamide (DMF) showed irreversible waves for both ligands. In the same experimental conditions, Fe(III)ClL1 exhibited a reversible redox couple Fe(III)/Fe(II) while the three other complexes showed quasi-reversible systems. The behavior of some of these complexes in the presence of dioxygen and the comparison with cytochrome P450 are described.
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