A bis(μ-phenoxo)-bridged dizinc complex with hydrolytic activity.

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Streszczenie

The dinuclear complex $[Zn_2(papy)_2]\cdot 2CH_3OH$ [H_2papy = *N*-(2-hydroxybenzyl)-*N*-(2-picolyl)glycine] was synthesized and characterized. The crystal structure of the complex reveals that both Zn^{II} ions are pentacoordinate with distorted pentagonal bipyramidal coordination arrangements. The phenoxyl groups of each ligand bridge the two metal atoms, whereas each carboxylate of the ligand is terminally bound to one Zn^{II} ion. Potentiometric studies of the Zn^{II}:H_2papy system in a methanol/water mixture show the existence of a mononuclear species at lower pH; but at a pH above 5, a dimeric species starts to dominate and transforms further into a bis(μ-phenoxo) bridged dizinc complex by deprotonation of phenolic hydrogen. A kinetic study of the hydrolysis of bis(2, 4-dinitrophenyl)phosphate at different pH, catalyzed by complex **1** , indicates a maximum rate at pH 9, where the bis(μ-phenoxo)-bridged dizinc species corresponding to **1** dominates in solution.

Słowa kluczowe

zinc, hydrolases, phosphoester

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