

Zinc(II) complexes derived from imidazo[1,2-a]pyridin-2-ylacetic acid (*HIP-2-ac*): $[Zn(IP-2-ac)_2(H_2O)]$ and unexpectedly, $[Zn_3(IP-2-ac)_6(H_2O)] \cdot 11H_2O$.

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Streszczenie

Two zinc(II) complexes based on imidazo[1,2-a]pyridin-2-ylacetate (*IP-2-ac*), $[Zn(IP-2-ac)_2(H_2O)]$ (**1**) and $[Zn_3(IP-2-ac)_6(H_2O)] \cdot 11H_2O$ (**2**), were synthesized and characterized by single-crystal X-ray diffraction. In both **1** and **2**, zinc(II) ions are five-coordinate with N_2O_3 donor set, best described as a distorted trigonal-bipyramidal geometry. In **1**, two *IP-2-ac* ligands chelate zinc(II) through a *N,O* donor set, whereas in **2**, both bidentate and μ -bridging binding modes of *IP-2-ac* are observed. The crystal of **1** comprises discrete $Zn(IP-2-ac)_2(H_2O)$ coordination entities combined into layers by hydrogen bonds. Inter-layer stabilization of the 3-D crystal lattice is provided by weak $C-H \cdots O$ contacts and $\pi \cdots \pi$ interactions. The structure of **2** consists of discrete trinuclear $Zn_3(IP-2-ac)_6(H_2O)$ coordination entities joined into crystal lattice by multiple water molecules.

Compound **1** was characterized by FTIR and FT-Raman spectroscopy, and in terms of thermal stability. Furthermore, its antibacterial activity was tested against selected gram-positive, gram-negative bacteria, and *Candida albicans* yeast and compared with activity of previously reported $[M(IP-2-ac)_2(H_2O)_2] \cdot 2H_2O$ ($M = Co, Ni, Mn, Cd$) complexes.

Słowa kluczowe

imidazo[1,2-a]pyridine, Zinc(II) complexes, X-ray structures, Vibrational spectra, Thermal stability, Antibacterial activity

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