Two coordination modes around the Cu(II) cations in complexes with benzo[*b*]furancarboxylic acids.

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Streszczenie

Three Cu(II) complexes with derivatives of the benzo[*b*]furancarboxylic acid have been synthesized and characterized by the elemental and thermal analyses, and IR spectroscopy. The geometry of metal–ligand interaction for all compounds has been described using X-ray absorption spectroscopy and for one of them by X-ray crystallography. Two mononuclear Cu(II) complexes, with 7-acetyl-5-bromo-6-hydroxy-3-methylbenzo[*b*]furan-2-carboxylic and 6-acetyl-5-hydroxy-2-methylbenzo[*b*]furan-3-carboxylic acids, exhibit a tetra-fold coordination, CuO_4. The Cu(II) cation in crystals with 7-acetyl-6-methoxy-3-methyl-benzo[*b*]furan-2-carboxylic acid is penta-coordinated; the bridging COO^- groups and ethanol molecule stabilize the dinuclear center Cu_2O_{10}. The powdered form of this complex is based on the Cu_2O_8 units, indicating the absence of the ethanol molecules

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