

# Synthesis, Spectral and Thermal Studies, and Crystal Structure of *cis*-Bis(4-methylimidazole)bis(picolinato)copper(II) [Cu(pic)<sub>2</sub>(4-MeIm)<sub>2</sub>]

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The mixed-ligand picolinato (pic) complex of Cu(II) with 4-methylimidazole (4-MeIm), [Cu(pic)<sub>2</sub>(4-MeIm)<sub>2</sub>], was synthesized and characterized by elemental analysis, magnetic susceptibility, spectroscopic methods (UV/vis and FT-IR) and X-ray diffraction. In the slightly distorted octahedral *cis*-bis(4-methylimidazole)bis(picolinato)copper(II) complex, the pic ligands are coordinated to the Cu(II) ion as bidentate *N*, *O*-donors forming chelate rings. The 4-MeIm ligands are *N*-coordinated in *cis* positions. The complex crystallizes in the triclinic space group  $P\bar{1}$  with unit cell parameters  $a = 9.204(5)$ ,  $b = 9.498(5)$ ,  $c = 13.095(5)$  Å,  $\alpha = 90.395(5)$ ,  $\beta = 101.687(5)$ ,  $\gamma = 112.291(5)^\circ$  and  $Z = 2$ . Hydrogen bondings and C-H $\cdots\pi$  interactions occur between picolinato and methylimidazole ligands of neighboring complex molecules. The thermal decomposition of the complex is described.

**Key words:** Copper(II) Complex, 4-Methylimidazole, Picolinic Acid, Thermal Decomposition