

Synthesis and Spectral, Thermal and Structural Characterization of a Vitamin B13 Complex of Nickel(II) with 2-Aminothiazole, *mer*-[Ni(HOr)(H₂O)₂(ata)₂]

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The *mer*-bis(2-aminothiazole)diaqua-orotato-nickel(II) complex, *mer*-[Ni(HOr)(H₂O)₂(ata)₂] (**1**), was synthesized and characterized by spectral (IR and UV/vis) and thermal studies. In addition, the crystal structure of the complex was determined by single crystal X-ray diffraction. The complex crystallizes in the triclinic system, space group $P\bar{1}$. The orotate ligand is coordinated to the nickel(II) atom through a nitrogen atom of the pyrimidine ring and an oxygen atom of the carboxylate group as a bidentate dianion. The coordination of the Ni(II) ion is extended to six by the two 2-aminothiazoles (ata) and two water molecules. The thermal decomposition has been studied in a static air atmosphere.

Key words: Orotato Complex, Vitamin B13 Complex, 2-Aminothiazole