

Crystal Structure of Octahedral Nickel(II) Complex of Hexaazamacrotetracycle Containing Axial Azido Ligand

Ki-Young Choi, Il-Hwan Suh^a and Geum-Hong Choo^b

Kongju National University, Kougju 314-701, Korea

Department of Physics, Chungnam National University, Taejon, 305-764 Korea^a

Korea University of Technology and Education, Cheonan P.O. Box 55, 330-800 Korea^b

The complex $[\text{NiL}(\text{N}_3)_2] \cdot 5\text{H}_2\text{O}$ (1) (L = 1,3,10,12,15,18-hexaazatetracyclo[16.2.1.1^{12,15}.0^{4,9}]docosane) has been synthesized and structurally characterized. 1 crystallizes in the triclinic space group $P\bar{1}$, $a = 8.6881(52)\text{ \AA}$, $b = 15.6997(19)\text{ \AA}$, $c = 17.4574(22)\text{ \AA}$, $\alpha = 109.2728(104)^\circ$, $\beta = 90.8492(220)^\circ$, $\gamma = 93.5914(213)^\circ$, $V = 2242(1)$, $Z = 2$ with two molecules in an asymmetric unit. The complex (1) contains two 1,3-diazacyclopentane subunits in the six-membered chelate rings and one cyclohexane subunit in the five-membered chelate ring. The nickel(II) ion is coordinated to the two tertiary and two secondary nitrogen atoms in a basal plane and two axial azido ligands with a distorted octahedral geometry.

