THE SYNTHESIS AND CHARACTERIZATION OF A NEW SYMMETRICAL 8,9-
BIS(HYDROXYIMINO)-4,7,10,13-TETRAAZA-1,2,15,16-O-
DICYCLOPENTYLIDENEHEXADECANE AND ITS TRANSITION METAL 
COMPLEXES

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8,9-Bis(hydroxyimino)-4,7,10,13-tetraaza-1,2,15,16-O-dicyclopentylidenehexadecane (LH$_2$) was prepared from 1,2-O-cyclopentylidene-4-aza-6-aminohexane (R-NH$_2$) and dichloroglyoxime. The structures of this vic-dioxime has been determined as the (E, E)-form from $^1$H-NMR and $^{13}$C-NMR data. Mononuclear complexes with a metal-ligand ratio of 1:2 have been prepared with Co(II), Cu(II) and Ni(II). The metal-ligand ratio of the U(VI) complex is 1:1 and dimeric structure. The structure of the ligand and its complexes has been deduced from magnetic susceptibility, elemental analyses, IR, UV-VIS, $^1$H-NMR, $^{13}$C-NMR spectroscopy, TGA and DTA methods.

![Fig. 1.8,9-Bis(hydroxyimino)-4,7,10,13-tetraaza-1,2,15,16-O-dicyclopentylidenehexadecane (LH$_2$).](image)