Oxime Thiosemicarbazones, Nickel(II)

1-Phenyl-1,2-propanedione-2-oxime reacts with 3-piperidylthiosemicarbazide and 3-hexamethyleneiminylthiosemicarbazide to give the respective 1-phenyl-1,2-propanedione-1-thiosemicarbazone-2-oximes, HPopip and HPohexim. The crystal structure of HPopip shows the oxime and thiosemicarbazone moieties in a conformation single-trans respect to carbon-carbon. A six-coordinate nickel(II) complex, \([\text{Ni(Pohexim)}_2]\), has two monoanionic (through loss of a proton from the thiosemicarbazone function) oxime-thiosemicarbazone ligands coordinated in a meridonal arrangement via the oxime nitrogen, the thiosemicarbazone imine nitrogen and the thiolato sulfur atoms. The bond distances to nickel are shorter than found for other six-coordinate complexes with monoanionic tridentate thiosemicarbazone ligands.