# Synthesis and Crystal Structure of a Novel Polymeric Lead(II) Complex with Thiosemicarbazonato and Thiocyanate Ligands

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Lead(II) Complex, 2-Acetylpyridine-$^4$N-methylthiosemicarbazone

A novel heptacoordinated thiosemicarbazonato lead(II) complex [Pb(4ML)(SCN)] (4ML = 2-Acetylpyridine-$^4$N-methylthiosemicarbazonato) was synthesized and characterized by conventional methods (IR and elemental analysis) and single-crystal X-ray diffraction. [Pb(4ML)(SCN)] shows an unusual polymeric structure in which the lead atom is hexa-coordinate, the deprotonated thiosemicarbazone both chelates and bridges, and the thiocyanate group acts as bridge between lead(II)-thiosemicarbazonate fragments. There is hydrogen-bonding between the polymeric chains. The complex crystallizes in the triclinic space group $P\bar{1}$ with $a$ = 7.461(2), $b$ = 9.572(2), $c$ = 11.235(2) Å, $\alpha$ = 66.51(3), $\beta$ = 84.01(3), $\gamma$ = 68.75(3)°, $V$ = 685.1(2) Å$^3$, $Z$ = 2.