

PYRIDINE COMPLEXES OF SOME FIRST ROW TRANSITION METALS

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Our group has begun to examine the solid state structures of transition metal complex ions with different amines coordinated (e.g. pyridine (py), substituted pyridines (Lpy)). We have prepared the pyridine-sulfato complexes of Mn, Fe, Co, Ni, Cu and Zn and some of the substituted pyridine-sulfato complexes. Though the crystals were all prepared in the same manner, the coordination environment of each metal was observed to be different; that is, tetrahedral, square pyramidal, trigonal bipyramidal and octahedral. The structures of these transition metal amine- sulfato-coordinated complexes show infinite 1-dimensional chains of alternating metal ions and sulfato ligands of the form ABAB or ABCABC or ring type structures. Some of our findings will be presented