Silver(I)-Saccharinato Complexes with 2-(Aminomethyl)pyridine and 2-(2-Aminoethyl)pyridine Ligands: [Ag(sac)(ampy)] and [Ag₂(sac)₂(μ -aepy)₂]

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Two new saccharinato-silver(I) (sac) complexes, [Ag(sac)(ampy)] (1), and [Ag₂(sac)₂(μ -aepy)₂] (2), [ampy = 2-(aminomethyl)pyridine, aepy = 2-(2-aminoethyl)pyridine], have been prepared and characterized by elemental analysis, IR spectroscopy, thermal analysis and single crystal X-ray diffraction. Complexes 1 and 2 crystallize in the monoclinic space group P_1 c and triclinic space group P_1 , respectively. The silver(I) ions in both complexes 1 and 2 exhibit a distorted T-shaped AgN₃ coordination geometry. 1 consists of individual molecules connected into chains by N-H···O hydrogen bonds. There are two crystallographically distinct dimers in the unit cell of 2 and in each dimer, the aepy ligands act as a bridge between two silver(I) centers, resulting in short argentophilic contacts [Ag1···Ag1 = 3.0199(4) Å and Ag2···Ag2 = 2.9894(4) Å]. Symmetry equivalent dimers of 2 are connected by N-H···O hydrogen bonds into chains, which are further linked by aromatic $\pi(py) \cdots \pi(py)$ stacking interactions into sheets.

Key words: Saccharinate, 2-(Aminomethyl)pyridine, 2-(2-Aminoethyl)pyridine, Silver(I), Crystal Structure

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