

Synthesis and Characterization of Cadmium and Mercury Saccharinate Complexes with 2-Dimethylaminoethanol: *cis*-[Cd(sac)₂(dmea)₂] and [Hg(sac)₂(dmea)(H₂O)]

Veysel T. Yilmaz^a, Vecdi Kars^a, and Canan Kazak^b

^a Department of Chemistry, Faculty of Arts and Sciences, Ondokuz Mayıs University,
55139 Kurupelit, Samsun, Turkey

^b Department of Physics, Faculty of Arts and Sciences, Ondokuz Mayıs University,
55139 Kurupelit, Samsun, Turkey

Reprint requests to Prof. Dr. V. T. Yilmaz. E-mail: vtyilmaz@omu.edu.tr

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The new cadmium and mercury saccharinate (sac) complexes, *cis*-[Cd(sac)₂(dmea)₂] (**1**) and [Hg(sac)₂(dmea)(H₂O)] (**2**) (dmea = 2-dimethylaminoethanol), have been prepared and characterized by elemental analysis, IR spectroscopy, thermal analysis and single crystal X-ray diffraction. In complex **1**, the cadmium(II) ion is coordinated by two neutral dmea ligands and two sac anions in a distorted octahedral CdN₃O₃ coordination geometry. The dmea ligand acts as a bidentate N, O chelate, while the sac ligands behave as an ambidentate ligands. One of them coordinates to the cadmium(II) ion through the carbonyl oxygen atom, while the other is *N*-bonded. In complex **2**, the mercury(II) ion is coordinated by an aqua ligand, a chelating dmea ligand and two *N*-bonded sac ligands, forming a distorted trigonal bipyramidal coordination HgN₃O₂. The molecules interact with each other through O–H···O hydrogen bonds and aromatic $\pi(\text{sac})\cdots\pi(\text{sac})$ stacking interactions, leading to a three-dimensional supramolecular network.

Key words: Saccharinate, 2-Dimethylaminoethanol, Cadmium, Mercury, Crystal Structure