

# The Crystal Structures of 2-(3'-Hydroxypropyl)benzimidazolium Hexa- and Tetrachloroplatinate

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Z. Naturforsch. **60b**, 164 – 168 (2005); received August 20, 2004

2-(3'-Hydroxypropyl)benzimidazolium (Hhpb) hexa- and tetrachloroplatinate ( $C_{10}H_{13}N_2O$ )<sub>2</sub>·[PtCl<sub>6</sub>] **1** and ( $C_{10}H_{13}N_2O$ )<sub>2</sub>·[PtCl<sub>4</sub>] **2** were synthesized and their crystal structures determined. Compound **1** is monoclinic, space group  $P2_1/n$ ,  $a = 8.800(1)$ ,  $b = 14.389(2)$ ,  $c = 10.264(2)$  Å,  $\beta = 98.540(10)^\circ$ ,  $V = 1285.3(3)$  Å<sup>3</sup>,  $Z = 2$  and  $D_c = 1.959$  g cm<sup>-3</sup>. Compound **2** is triclinic, space group  $P\bar{1}$ ,  $a = 7.8480(10)$ ,  $b = 9.0460(10)$ ,  $c = 9.6980(10)$  Å,  $\alpha = 65.420(10)$ ,  $\beta = 68.810(10)$ ,  $\gamma = 76.770(1)^\circ$ ,  $V = 581.26(4)$  Å<sup>3</sup>,  $Z = 1$  and  $D_c = 1.969$  g cm<sup>-3</sup>. In both compounds, the Pt atoms reside at a centre of inversion. Compounds **1** and **2** are comprised of 2-(3'-hydroxypropyl)benzimidazolium (Hhpb)<sup>+</sup>: ( $C_{10}H_{12}N_2O$ )<sup>+</sup> and [PtCl<sub>6</sub>]<sup>2-</sup> and [PtCl<sub>4</sub>]<sup>2-</sup> ions, respectively, linked by intermolecular hydrogen bonds N...Cl [range from 3.428(3) to 3.584(4) Å], N...O [2.769(5) Å] and O...Cl [3.338(4) and 3.321(3) Å] for **1**, and N...Cl [3.162(7) Å], N...O [2.749(8) Å] and O...Cl [3.289(6) Å] for **2**.

**Key words:** Crystal Structure, Platinate Salts, Benzimidazole, Antitumor Drugs, Hydrogen Bonds