Thermal Transformations of some Alicyclic β -amino acid Hydrates

László Fábián^a, Alajos Kálmán^a, Gyula Argay^a, Gábor Bernáth^b, Zsuzsanna Cs. Gyarmati^b, Mino R. Caira^c, Vincent J. Smith^c, a Institute of Structural Chemistry, Chemical Research Center of the Hungarian Academy of Sciences. b Institute of Pharmaceutical Chemistry, University of Szeged, Hungary. Chemistry, University of Cape Town, South Africa. E-mail: lfabian@chemres.hu

Alicyclic β -amino acids were recently used for the construction of two-dimensional hydrogen-bond grids that link molecules into bilayer structures [1]. While the crystallization of several β -amino acids yielded the expected bilayer type structures, others (*cis*-2-hydroxycyclohex-4-ene-1-carboxylic acid, all-*cis*-amino-4-hydroxycyclohexanecarboxylic acid, *trans*-2-aminocyclopentane-carboxylic acid and 3-*exo*-aminobicyclo[2.2.1]hept-5-ene-2-*exo*-carboxylic acid) crystallized as hydrates and did not form the expected grid pattern. These hydrates were analysed by thermogravimety, differential scanning calorimetry, powder and single crystal X-ray diffraction in an attempt to prepare and characterize their anhydrous crystal forms. The results show that each powder loses the hydrogen-bonded solvent before decomposition. The powder patterns of the solvent-free forms show similarity to those of the bilayer structures.

[1] Fábián L., Kálmán A., Argay Gy., Bernáth G., Gyarmati Zs. Cs., *Cryst. Growth Des.*, 2005, **5**, *in press*.

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