X-ray Diffraction and Spectroscopic Study of the Complex of 2,2-Dimethylpyridine 1-Oxide with Succinic Acid (Poteitin)

S. P. Ponomarenko, Yu. Ya. Borovikov, and V. P. Kukhar'

Institute of Bioorganic Chemistry and Petrochemistry, Ukrainian National Academy of Sciences, Kiev, Ukraine

Received September 14, 1999

Abstract - In the solid phase, the complex of 2,2-dimethylpyridine 1-oxide with succinic acid is a "polymeric" molecular complex. It crystallizes in the triclinic system, space group $P\bar{1}$ (no. 2). The hydrogen bond networks on the surface and in the bulk of the crystals are very mobile. The rearrangements of H bonds in the bulk after changing temperature are described by second-order reaction equations. Sorbed moisture forms with the substance molecules fairly strong hydrogen bonds (ΔH reaches 4.6 kcal mol^{-1}); the enthalpies of H bonds between the 2,6-lutidine *N*-oxide and succinic acid molecules are close to 7.2 kcal mol^{-1}.