

Synthesis and Powder Diffraction Analysis of Propionamide Oxalic Acid Complex.

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Abstract: A propionamide oxalic acid complex was prepared from propionamide and oxalic acid. It was a bright and hygroscopic compound with very low hardness and was accompanied with deformation in air at room temperature. Its X-ray powder diffraction data were collected by a computer diffractometer and was analyzed by profile analysis techniques.

The compound was crystallized in triclinic system with space group $P\bar{1}$. Lattice parameters were as follows:

$$\begin{aligned} a &= 6.334(4)\text{\AA} & , & & b &= 10.486(6)\text{\AA} & , & & c &= 7.225(4)\text{\AA} \\ \alpha &= 85.55(3)^\circ & , & & \beta &= 82.20(1)^\circ & , & & \gamma &= 80.03(2)^\circ \\ V &= 466.6(5)\text{\AA}^3 & , & & D_x &= 1.16\text{ gcm}^{-3} \end{aligned}$$