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 $P\overline{1}$. Lattice parameters were as follows.

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\begin{align*}
& a = 6.334(4)\,\text{Å}, \quad b = 10.486(6)\,\text{Å}, \quad c = 7.225(4)\,\text{Å} \\
& \alpha = 85.55(3)^\circ, \quad \beta = 82.20(1)^\circ, \quad \gamma = 80.03(2)^\circ \\
& V = 466.6(5)\,\text{Å}^3, \quad D_x = 1.16 \, \text{g cm}^{-1}
\end{align*}
\]