CRYSTAL STRUCTURE OF POLYMORPH ORTHORHOMBIC OF ENALAPRIL MALEATE, AN COMMON API USED IN THE TREATMENT OF HYPERTENSION

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Most pharmaceutical materials, the so-called active pharmaceutical ingredients (APIs) and the excipients, are in solid phase. The choice of the form of drug depends on several physicochemical factors associated with its stability, solubility, bioavailability, efficacy, and manufacturing. Different polymorphs of a given API can display different physicochemical and mechanical properties. Enalapril maleate is an API used in the treatment of hypertension. A search for this API in the Cambridge Structural Database resulted in three entries. Two of them correspond to its maleate phase: monoclinic (polymorph I) and orthorhombic phase (polymorph II). The additional report corresponds to enalaprilat (free base). The crystal structure of polymorph II was previously determinate by X-ray powder diffraction data [1]. The hydrogen atoms information and intermolecular interactions is not reported. Plate crystals were obtained after recrystallization of raw material in water. This compound crystallizes in an orthorhombic unit cell \( P2_1 2_1 2_1 \), with \( a = 33.996(2) \, \text{Å} \), \( b = 6.6491(4) \, \text{Å} \), \( c = 11.2099(7) \, \text{Å} \) and \( V = 2533.9(3) \, \text{Å}^3 \), similar to polymorph II. The structural features of this phase will be presented and compared to the structure contained in the CSD.

**Keywords:** Enalapril maleate, crystal structure, polymorph

**References:**


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