**Growth, Structural, Hirshfeld surface analysis and molecular docking of 1H-Benzo[d]imidazole-3-ium 2-hydroxybenzoate single crystals**

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**Abstract**

Organic 1H-Benzo[d]imidazole-3-ium 2-hydroxybenzoate single crystals were synthesized at room temperature using solvent evaporation technique. Single crystal X-ray diffraction analysis was used to identify the crystal structure of the grown crystal, which is classified as a monoclinic system with space group P21/c. The unsymmetric unit of the title chemical consists of a C7H7N2+ cation and a C7H5O3− anion in which the N atom, the cation is hydronated. Hirshfeld surface investigation revealed the nature of molecular interactions. The inhibitory effect of the title compound on NSP15 Endoribonuclease (6VWW) was identified by molecular docking. It helps to find new drugs by examining the way compounds interact to proteins.

**Keywords**

Solvent evaporation; Single crystal; X-ray diffraction; docking.