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Structure characterization of 2,6-bis(2-hydroxyethyl)-1-phenylimidazo[1,5-c]-quinazoline-3,5-dione

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The work presents the results of reaction product of 1-phenyl-2H,6H-imidazo[1,5-c]quinazoline-3,5-dione with 2 molar excess ethylene oxide.

1-phenyl-2,6-bis(2-hydroxyethyl)imidazo[1,5-c]quinazoline-3,5-dione was isolated at high yield from the reaction mixtures and identified based on the IR, ¹H- and ¹³C-NMR spectroscopies. X-Ray diffraction measurement was also performed for the single-crystals obtained by crystallization of crude product from ethanol. It was indicated that 1-phenyl-2,6-bis(2-hydroxyethyl)imidazo[1,5-c]quinazoline-3,5-dione crystallizes in the monoclinic $P2_{1/n}$ space group with two molecules of compound in the asymmetric unit of the crystal lattice. The crystal analysis revealed various types of molecular interactions in the crystal lattice of investigated compound. To understand better the nature of packing of molecules in the crystal lattice of investigated compound the Hirshfeld surface analysis was performed.

Biography

Agnieszka Szyszkowska graduated MA in 2014 at the University of Jan Kochanowski. She completed two courses of study: chemistry and biology. She started PhD at the Rzeszów University of Technology in 2014.

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