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Crystal structure of benzyltriphenylphosphonium chloride monohydrate (Article)

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Abstract

The title compound, Ph₃(PhCH₂)P⁺Cl⁻·H₂O, was obtained unintentionally as the product of an attempted synthesis of a silver dithiocarbamate complex using benzyltriphenylphosphonium as the counter-ion. The asymmetric unit consists of a phosphonium cation and a chloride anion, and a water molecule of crystallization. In the crystal, the chloride ion is linked to the water molecule by an O-H...Cl hydrogen bond. The three units are further linked via C-H...Cl and C-H...O hydrogen bonds and C-H...π interactions, forming a three-dimensional structure.

Author keywords

Benzyltriphenylphosphonium; C-H...π interactions; Chloride; Crystal structure; Hydrogen bonding

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