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Crystal structure of the complex phosphorus [Ph₃AmP]⁺I⁻ и [Ph₃AmP]⁺₂[I]⁻[I₃]⁻

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Abstract

The interaction of iodide triphenylamylphoaphonium Ph₃AmPI (I) with iodide of antimony in acetone results in the synthesis of the complex $[Ph_3AmP]^+_2[I]^-[I_3]^-$ (II). Crystals I consist of cations $[Ph_3AmP]^+$ and anions $[I]^-$. In **II** there are two types of tetrahedral cations $[Ph_3AmP]^+$ and anions $[I]^-$, $[I_3]^{-}$. In the cations of I and II of the P atoms have distorted tetrahedral coordination (CPC 106.48 $(12)^{\circ}$ -111.25(12)° and 107.05(9)°-112.62(10)° respectively). Centrosymmetric anion $[I_3]^{\circ}$ is almost linear (angle I(2)I(1)I(3) 178.65°), the distance I(1)-I(2) and I(2)-I(3) are 2.8925(2) and 2.9281 (2) Å.