

Crystal structure of the complex phosphorus $[\text{Ph}_3\text{AmP}]^+\text{I}^-$ и $[\text{Ph}_3\text{AmP}]^+_2[\text{I}]^-\text{[I}_3]^-$

© Vladimir V. Sharutin,*⁺ Vladislav S. Senchurin,
Olga K. Sharutina, and Baira B. Kunkurdonova

Blagoveshchensk state pedagogical university. Department of chemistry. Lenin St., 104. Blagoveshchensk,
675000. Russia. Phone: +7 (4162) 37-61-91. E-mail: vvsharutin@rambler.ru

*Supervising author; ⁺Corresponding author

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Abstract

The interaction of iodide triphenylamylphosphonium Ph_3AmPI (**I**) with iodide of antimony in acetone results in the synthesis of the complex $[\text{Ph}_3\text{AmP}]^+_2[\text{I}]^-\text{[I}_3]^-$ (**II**). Crystals **I** consist of cations $[\text{Ph}_3\text{AmP}]^+$ and anions $[\text{I}]^-$. In **II** there are two types of tetrahedral cations $[\text{Ph}_3\text{AmP}]^+$ and anions $[\text{I}]^-$, $[\text{I}_3]^-$. In the cations of **I** and **II** of the P atoms have distorted tetrahedral coordination (CPC 106.48 (12)°-111.25(12)° and 107.05(9)°-112.62(10)° respectively). Centrosymmetric anion $[\text{I}_3]^-$ 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.