

Synthesis and crystal structure of tetrachloroaurate butyltriphenylphosphonium $[\text{Ph}_3\text{BuP}]^+ [\text{AuCl}_4]^-$

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Abstract

Interaction of hydrate tetrachloroaurum acid with chloride butyltriphenylphosphonium in acetone was carried out to produce complex $[\text{Ph}_3\text{BuP}]^+[\text{AuCl}_4]^-$ (**I**). According to date X-ray, the crystal of complex **I** represented tetrahedral cations $[\text{Ph}_3\text{BuP}]^+$ (P-C_{Ph} 1.792(6)-1.800(6) Å, P-C_{Bu} 1.811(6) Å, CPC 107.5(3)°-111.2(3)°) and planar anions $[\text{AuCl}_4]^-$ (Au-Cl 2.2647(17)°-2.2930(16) Å, ClAuCl 89.40(6)-90.54(6)°).