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Synthesis and crystal structure of tetrachloroaurate butyltriphenylphosphonium [Ph₃BuP]⁺ [AuCl₄]⁻

© Vladimir V. Sharutin,** Vladislav S. Senchurin, Olga K. Sharutina, and Ludmila N. Vinokurova

Department of Chemistry. National Research Southern Ural State University. Lenin St., 76. Chelyabinsk, 454080. Russia. Phone: + 7 (351) 267-95-39. E-mail: vvsharutin@rambler.ru

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Abstract

Interaction of hydrate tetrachloroaurum acid with chloride butyltriphenylphosphonium in acetone was carried out to produce complex $[Ph_3BuP]^+[AuCl_4]^-$ (I). According to date X-ray, the crystal of complex I represented tetrahedral cations $[Ph_3BuP]^+$ (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 $[AuCl_4]^-$ (Au-Cl 2.2647(17)°-2.2930(16) Å, ClAuCl 89.40(6)-90.54(6)°).

^{*}Supervising author; *Corresponding author