

## Synthesis and structure of 4-nitrophenylacetate tetraphenylantimony

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### Abstract

Interaction of pentaphenylantimony with 4-nitrophenylacetic acid or *bis*(4-nitrophenylacetato) triphenylantimony in toluene was carried out to produce 4-nitrophenylacetate tetraphenylantimony with the yield up to 95%. *Bis*(4-nitrophenylacetate) of triphenylantimony was synthesized with 84% yield by the reaction of oxidative addition of hydrogen peroxide and 4-nitrophenylacetic acid in the air from triphenylantimony. The structure of the crystal solvates of 4-nitrophenylacetate tetraphenylantimony with toluene  $\text{Ph}_4\text{SbOC}(\text{O})\text{CH}_2\text{C}_6\text{H}_4\text{NO}_2 \cdot 4 \cdot \frac{1}{2}\text{C}_6\text{H}_5\text{CH}_3$  (**I**) was found by X-ray method. Sb atom in **I** has a distorted trigonal-bipyramidal coordination with phenyl and carboxylate ligands in the axial positions (angle  $\text{C}_a\text{SbO}$  176.26 (8)°). Bond lengths of Sb-O, Sb-C<sub>a</sub> and Sb-C<sub>e</sub> are 2.220 (2), 2.168 (3) and 2.108 (3), 2.115 (2), 2.119 (2) Å, respectively. In molecule **I** there is observed intramolecular contact between the Sb and O atoms of the carbonyl group (3.247 (3) Å). Structural organization in the crystal is due to weak hydrogen bonds.