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Structural features of the triaryl antimony compounds

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Abstract

According to X-ray analysis the antimony atoms in the two types of triphenylantimony crystallographically independent molecules (**1*a,b***) have a distorted tetragonal coordination with the carbon atoms of the phenyl substituent and the unshared electron pair of the vertices of the tetrahedron. Sb–C bond lengths and CSbC angles are equal to 2.151(3), 2.156(3), 2.161(4) Å (***a***); 2.150(3), 2.154(3), 2.158(3) Å (***b***) and 97.60(12)°, 94.87(13)°, 95.82(12)° (***a***); 95.58(12)°, 96.24(12)°, 97.81(12)° (***b***) respectively. We analyzed the geometric characteristics of molecules of triaryl antimony compounds, and identified factors affecting the value of the Sb–C bond lengths and CSbC bond angles.