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Synthesis and structure of *bis*(phenylcarboranylcarboxylato) tri(*p*-tolyl)antimony

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Abstract

The reaction of tri(p-tolyl)antimony with phenyl-*o*-carboranylcarboxylic acid in the presence of hydrogen peroxide produced di(phenylcarboranylcarboxylato)tri(*p*-tolyl)antimony. The crystal contains three types of crystallographically independent molecules, two of which are located on the twofold axis (central atoms Sb(1) and Sb(2)) and one (Sb(3)) – in the general position of the space group C2/c. The antimony atoms have a distorted trigonal-bipyramidal coordination with tolyl ligands in equatorial positions. The bond lengths are Sb-C 2.089(4)-2.101(3) Å, Sb-O 2.123(2)-2.148(2) Å. The molecule contains Sb···O(=C) donor-acceptor interaction 3.266(2)-3.310(3) Å. The angles CSbC are 127.59(18)°, 128.20(19)°, 127.24(14)° and the OSbO angles are 171.81(12)°, 172.09(13)°, 176.34(10)°, respectively.