Subsection: Organoelemental Chemistry.

Registration Code of Publication: 14-39-7-157

Publication is available for discussion within the functioning of the permanent internet-Conference "New methods of synthesis, structure and application of organoelemental compounds" http://butlerov.com/synthesys/ (English Preprint)

Contributed: September 29, 2014.

Synthesis and structure of *bis*(bromoacetate) *tris-(meta-*tolyl)bismuth

© Vladimir V. Sharutin,*+ and Olga K. Sharutina

Chemistry Faculty. South Ural State University. Lenin St., 76. Chelyabinsk, 454080. Russia. Phone: +7 (351) 267-95-70. E-mail: vvsharutin@rambler.ru

*Supervising author; *Corresponding author

Keywords: *tris*-(*meta*-tolylbismuth, bromoacetic acid, *tert*-butyl hydroperoxide, oxidative addition, *bis*(bromoacetate) *tris*-(*meta*-tolyl)bismuth, structure.

Abstract

Reaction of *tris-(meta-*tolyl)bismuth with bromoacetic acid in the presence of a tertiary butyl hydroperoxide in ether resulted in obtaining bis(bromoacetate) *tris-(meta-*tolyl)bismuth (I). According to the X-ray data, bismuth atoms in the two crystallographically independent molecules Ia and Ib have a distorted trigonal-bipyramidal coordination (angles OBiO and CBiC are 173.4(4)° and 109.4(5)-139.1(4)° (a), 172.7(3)° and 109.2(5)-140.1(5)° (b). The bond lengths Bi–C and Bi–O are equal to 2.174(12)-2.222(12) Å and 2.266(9)-2.307(9) Å. Carbonyl oxygen atoms are located opposite the largest angle of the equatorial CbiC (109.4(5), 111.3(4), 139.1(4)° (a) and 109.2(5), 110.7(5), 140.1(5)° (b).