| Thematic Section: Preparative Chemistry. | | Full Paper |
|--|--|------------|
|--|--|------------|

Subsection: Organometallic Chemistry.

Registration Code of Publication: 13-34-4-55

Publication is available for discussion in the framework of the on-line Internet conference "New methods of synthesis, structure and application of organoelemental compounds" http://butlerov.com/synthesys/http://butlerov.com/synthesys/Contributed: March 20, 2013.

Tris(2-methoxyphenyl)bismuth. Structure and reaction of oxidative addition.

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

Department of Organic Chemistry. National Research South Ural State University. V.I. Lenin St., 76. Chelyabinsk, 454080. Russia. Phone: +7 (351) 267-95-70. E-mail: vvsharutin@rambler.ru

*Supervising author; *Corresponding author

Keywords: tris(2-methoxyphenyl) bismuth, composition, phenylpropiolic acid.

Abstract

According to X-ray analysis of bismuth atoms in the molecules of *tris*(2-methoxyphenyl)bismuth have tetragonal coordination with carbon atoms of aryl substituents and unshared electron pairs at the vertices of the tetrahedron. Lengths of bonds Bi-C angles of CBiC are equal to 2.243(15)-2.255(18) Å and 92.5(5)-95.3(8)° respectively. Distances between atoms of bismuth and oxygen of methoxygroups (Bi···OCH₃) make up 3.055(17)-3.129(18) Å, due to which the coordination number of Bi atom increases to six. By interaction of *tris*(2-methoxyphenyl)bismuth, phenylpropiolic acid and hydrogen peroxide (molar ratio 1:2:1 with the yield 92% we have obtained *bis*(phenylpropiolate) *tris*(2-methoxyphenyl)bismuth and defined its structure.