



>>Entry Name: **Bis(acetato-*O*)triphenylbismuth**, 10CI

**Synonym(s):** Bis(acetyloxy)triphenylbismuth. Triphenylbismuth diacetate

**CAS Registry Number:** 7239-60-3

**Related CAS Registry Numbers(s):** 28899-97-0

$\text{Ph}_3\text{Bi}(\text{OAc})_2$

**Molecular Formula:**  $\text{C}_{22}\text{H}_{21}\text{BiO}_4$

**Molecular Weight:** 558.386

**Accurate Mass:** 558.124359

**Percentage Composition:** C 47.32%; H 3.79%; Bi 37.43%; O 11.46%

**Source/Synthesis:** Synth. from  $\text{Ph}_3\text{BiCl}_2 + \text{AgOAc}$ , or from  $\text{Ph}_3\text{Bi}$  and  $\text{Pb}(\text{OAc})_4$

**Use/Importance:** Oxidant for primary and secondary allylic alcohols. Oxidises  $\text{RSH} \rightarrow \text{RSSR}$ . Phenylates alcohols and converts diols into their monophenyl ethers. *N*-Phenylates primary and secondary amines in presence of  $\text{Cu}^{\text{II}}$ . Phenylates enols exclusively at O and indoles at C. *C*-Phenylates chromanones, 4-hydroxycoumarin. Cleaves 1,2-glycolstannylenes

**Physical Description:** Cryst. ( $\text{Me}_2\text{CO}$  or toluene/petrol or  $\text{H}_2\text{O}$ )

**Melting Point:** Mp 152-153°. Mp 173°. Mp 186°

**Other Data:** Dec. in toluene at 100° or at 20° in presence of  $\text{Cu}^{\text{II}}$ ; with  $\text{Pd}(\text{OMe})_2 \rightarrow$  biphenyl

#### References:

Supniewski, J.V. *et al.*, *J.A.C.S.*, 1926, **48**, 507, (*synth*)

Wittig, G. *et al.*, *Chem. Ber.*, 1964, **97**, 789, (*synth*)

Goel, R.G. *et al.*, *Can. J. Chem.*, 1970, **48**, 2488, (*synth, ir*)

Barton, D.H.R. *et al.*, *Tetrahedron, Suppl.*, 1981, 73, (*use*)

Dodonov, V.A. *et al.*, *Zh. Obshch. Khim.*, 1981, **51**, 2380; 1984, **54**, 2157; 1985, **55**, 73; 466; 2514; *J. Gen. Chem. USSR (Engl. Transl.)*, 1981, **51**, 2053; 1984, **54**, 1928; 1985, **55**, 63; 413; 2232, (*props, use*)

David, S. *et al.*, *J.O.C.*, 1983, **48**, 441, (*props, use*)

Barton, D.H.R. *et al.*, *Tet. Lett.*, 1986, **27**, 3615; 3619, (*props, uses*)

Abramovitch, R.A. *et al.*, *Tetrahedron*, 1988, **44**, 3049, (*use*)

Barton, D.H.R. *et al.*, *Tetrahedron*, 1988, **44**, 5661; 6387, (*reactions, use*)

Finet, J., *Chem. Rev.*, 1989, **89**, 1496, (*use*)

Maccarone, E. *et al.*, *Gazz. Chim. Ital.*, 1989, **119**, 545, (*synth, ms, pmr*)

Brunner, H. *et al.*, *Organometallics*, 1989, **8**, 821, (*synth, reactions, use*)