



>>Entry Name: Diphenyl phosphonate

Synonym(s): Diphenyl phosphite. Hydridodi(phenoxo)oxophosphorus(*V*). Hydroxodi(phenoxo)phosphorus(*III*)

CAS Registry Number: 4712-55-4

Type of Compound Code(s): AC5040 AC1000

(PhO)₂P(O)H << >> (PhO)₂POH

Molecular Formula: C₁₂H₁₁O₃P

Molecular Weight: 234.191

Accurate Mass: 234.044582

Percentage Composition: C 61.54%; H 4.73%; O 20.50%; P 13.23%

General Statement: Tautomeric; almost completely in phosphonate form

Use/Importance: Reagent for peptide synth.

Physical Description: Liq.

Melting Point: Mp 12°. Mp 25°

Boiling Point: Bp_{0.008} 100°

Density: d²⁰ 1.231

Refractive Index: n_D²⁰ 1.5575

Aldrich: D21080-3

Fluka: 43155

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **2**, 1683A, (*nmr*)

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 551B, (*ir*)

Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 1440B, (*ir*)

Walsh, E.N., *J.A.C.S.*, 1959, **81**, 3023, (*synth*)

Vinogradov, L.I. *et al.*, *Zh. Obshch. Khim.*, 1972, **42**, 1724; *J. Gen. Chem. USSR (Engl. Transl.)*, 1972, **42**, 1712, (*nmr*)

Nifant'ev, E.E. *et al.*, *Zh. Obshch. Khim.*, 1972, **42**, 1936; *J. Gen. Chem. USSR (Engl. Transl.)*, 1972, **42**, 1929, (*synth*)

Yamazaki, N. *et al.*, *Tetrahedron*, 1974, **30**, 1323, (*use*)

Yamazaki, N. *et al.*, *Chem. Lett.*, 1977, 185, (*synth, props*)