



>>Derivative: Butyl ester

Synonym(s): Butyl (diethoxyphosphinyl)acetate

CAS Registry Number: 6481-20-5

Molecular Formula: C₁₀H₂₁O₅P

Molecular Weight: 252.247

Accurate Mass: 252.112662

Percentage Composition: C 47.62%; H 8.39%; O 31.71%; P 12.28%

Physical Description: Liq.

Boiling Point: Bp₂ 143°

>>Derivative: Ph ester

Synonym(s): Phenyl (diethoxyphosphinyl)acetate

CAS Registry Number: 3699-64-7

Molecular Formula: C₁₂H₁₇O₅P

Molecular Weight: 272.237

Accurate Mass: 272.081362

Percentage Composition: C 52.94%; H 6.29%; O 29.39%; P 11.38%

Physical Description: Liq.

Boiling Point: Bp_{0.2} 150-153°

>>Derivative: Benzyl ester

Synonym(s): Diethyl (benzyloxycarbonylmethyl)phosphonate

CAS Registry Number: 7396-44-3

Molecular Formula: C₁₃H₁₉O₅P

Molecular Weight: 286.264

Accurate Mass: 286.097012

Percentage Composition: C 54.55%; H 6.69%; O 27.95%; P 10.82%

Physical Description: Liq.

Boiling Point: Bp_{1.5} 174-179°

Refractive Index: n_D²³ 1.4932

>>Derivative: Trimethylsilyl ester

see Trimethylsilyl (diethoxyphosphinyl)acetate, [FKK34-D](#)

References:

- Aldrich Library of 13C and 1H FT NMR Spectra*, 1992, **1**, 1486B; 1486C, (*nmr*)
Aldrich Library of FT-IR Spectra, 1st edn., 1985, **1**, 917D; 918A, (*ir*)
Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 843A, (*ir*)
Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1967, **1**, 250; **12**, 299; **13**, 322; **12**, 527; **6**, 566; 612, (*use*)
Marvel, G. *et al.*, *J. Chim. Phys. Phys.-Chim. Biol.*, 1967, **64**, 1686, (*ethyl ester*, *P-31 nmr*)
Nishikawa, T., *Tetrahedron*, 1967, **23**, 2181, (*esters*, *ms*)
Malevannaya, R.A. *et al.*, *Zh. Obshch. Khim.*, 1971, **41**, 1426; *J. Gen. Chem. USSR (Engl. Transl.)*, 1971, **41**, 1432, (*synth*, *salts*)
Bodnarchuk, N.D. *et al.*, *Zh. Obshch. Khim.*, 1971, **41**, 1464; *J. Gen. Chem. USSR (Engl. Transl.)*, 1971, **41**, 1470, (*synth*)
Moskva, V.V. *et al.*, *Zh. Obshch. Khim.*, 1976, **46**, 534; *J. Gen. Chem. USSR (Engl. Transl.)*, 1976, **46**, 529, (*ester*, *use*)
Maier, L. *et al.*, *Phosphorus Sulfur Relat. Elem.*, 1978, **5**, 45, (*ester*, *synth*)
Coutrot, P. *et al.*, *Synthesis*, 1978, 133, (*synth*, *pmr*, *use*)
Clayton, J.P. *et al.*, *J.C.S. Perkin 1*, 1979, 308, (*synth*, *ir*, *pmr*, *use*)
Kořovsky, P. *et al.*, *Coll. Czech. Chem. Comm.*, 1980, **45**, 921, (*use*)
Bottin-Strzalko, T. *et al.*, *J.O.C.*, 1980, **45**, 1270, (*pmr*, *cmr*, *P-31 nmr*)
Smith, P. *et al.*, *J. Med. Chem.*, 1982, **25**, 1222, (*esters*, *synth*)
Rice, K.C., *J.O.C.*, 1982, **47**, 3617, (*ester*, *use*)
Cload, P.A. *et al.*, *Org. Mass Spectrom.*, 1983, **18**, 57, (*ester*, *ms*)
Kihara, M. *et al.*, *Tetrahedron*, 1984, **40**, 1121, (*Ph ester*, *synth*, *ir*, *pmr*)
Rathke, M.W. *et al.*, *J.O.C.*, 1985, **50**, 2624, (*use*)
Ye, W. *et al.*, *Synthesis*, 1985, 986, (*esters*, *synth*, *ir*, *pmr*)
Villieras, J. *et al.*, *Tet. Lett.*, 1985, **26**, 53, (*use*)
Hutchinson, D.W. *et al.*, *J. Organomet. Chem.*, 1986, **309**, C7, (*Et ester*, *cmr*)
Coutrot, P. *et al.*, *Synthesis*, 1986, 661, (*chloride*, *synth*, *pmr*, *use*)
Strzalko, T. *et al.*, *Can. J. Chem.*, 1988, **66**, 391, (*Me ester*, *ir*, *cmr*, *P-31 nmr*)
Barchiesi, E. *et al.*, *J.C.S. Perkin 2*, 1990, 375, (*Et ester*, *cmr*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, EIC000