



>>Entry Name: [(Dimethoxyphosphinothioyl)thio]acetic acid, 9CI

Synonym(s): Dimethoic acid

CAS Registry Number: 1113-01-5

Type of Compound Code(s): AC4140

(MeO)₂P(S)SCH₂COOH

Molecular Formula: C₄H₉O₄PS₂

Molecular Weight: 216.218

Accurate Mass: 215.967987

Percentage Composition: C 22.22%; H 4.20%; O 29.60%; P 14.33%; S 29.66%

Physical Description: Solid

Melting Point: Mp 43-45°

Hazard & Toxicity: LD₅₀ (rat, orl) 2500 mg/kg

>>Derivative: Me ester

Synonym(s): Methyl [(dimethoxyphosphinothioyl)thio]acetate

CAS Registry Number: 757-86-8

Type of Compound Code(s): AC4140

Molecular Formula: C₅H₁₁O₄PS₂

Molecular Weight: 230.245

Accurate Mass: 229.983637

Percentage Composition: C 26.08%; H 4.82%; O 27.80%; P 13.45%; S 27.85%

Physical Description: Liq.

Boiling Point: Bp_{0.1} 110°

Density: d₂₀²⁰ 1.31

Refractive Index: n_D²⁰ 1.5207

>>Derivative: Et ester

Synonym(s): Ethyl [(dimethoxyphosphinothioyl)thio]acetate

CAS Registry Number: 1068-13-9

Type of Compound Code(s): AC4140

Molecular Formula: C₆H₁₃O₄PS₂

Molecular Weight: 244.272

Accurate Mass: 243.999287

Percentage Composition: C 29.50%; H 5.36%; O 26.20%; P 12.68%; S 26.25%

Physical Description: Liq.

Boiling Point: Bp_{0.2} 110-113°

Density: d₂₀²⁰ 1.31

Refractive Index: n_D²⁰ 1.5200

>>Derivative: Amide

Synonym(s): *O,O*-Dimethyl *S*-(2-amino-2-oxoethyl) phosphorodithioate

CAS Registry Number: 3692-87-3

Type of Compound Code(s): AC4140

Molecular Formula: C₄H₁₀NO₃PS₂

Molecular Weight: 215.234

Accurate Mass: 214.983971

Percentage Composition: C 22.32%; H 4.68%; N 6.51%; O 22.30%; P 14.39%; S 29.80%

Physical Description: Cryst. (CCl₄)

Melting Point: Mp 62-63°

>>Derivative: Methylamide

see Dimethoate, [DQR27-G](#)

References:

Hoegberg, E.I. *et al.*, *J.A.C.S.*, 1951, **73**, 557, (*derivs*)

U.S. Pat., 1962, 3 047 459; *CA*, **58**, 1349, (*esters*)

Grimmer, F. *et al.*, *Z. Naturforsch., B*, 1968, **23**, 10, (*synth, derivs*)

Sauer, H.H., *J. Agric. Food Chem.*, 1972, **20**, 578, (*tlc, tox*)