



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

Synonym(s): [(Dimethoxyphosphinothioyl)thio]succinic acid

CAS Registry Number: 1190-28-9

Type of Compound Code(s): AC4140

(MeO)₂P(S)SCH(¹COOH)CH²COOH

Molecular Formula: C₆H₁₁O₆PS₂

Molecular Weight: 274.255

Accurate Mass: 273.973467

Percentage Composition: C 26.28%; H 4.04%; O 35.00%; P 11.29%; S 23.38%

>>Variant: (±)-form

Molecular Formula: C₆H₁₁O₆PS₂

Molecular Weight: 274.255

Accurate Mass: 273.973467

Percentage Composition: C 26.28%; H 4.04%; O 35.00%; P 11.29%; S 23.38%

Physical Description: Cryst. (CHCl₃)

Melting Point: Mp 127-129° (115-118°)

>>Derivative: Di-Me ester

Synonym(s): Dimethyl [(dimethoxyphosphinothioyl)thio]butanedioate

CAS Registry Number: 3700-89-8

Type of Compound Code(s): AC4140

Molecular Formula: C₈H₁₅O₆PS₂

Molecular Weight: 302.309

Accurate Mass: 302.004767

Percentage Composition: C 31.78%; H 5.00%; O 31.75%; P 10.25%; S 21.21%

Physical Description: Liq.

Boiling Point: Bp_{0.2} 134.5°

Density: d₄²⁵ 1.29

Refractive Index: n_D²⁰ 1.5070

Hazard & Toxicity: LD₅₀ (rat, orl) 1020 mg/kg

>>Derivative: 1-Et ester

Synonym(s): β-Et ester. 1-Ethyl [(dimethoxyphosphinothioyl)thio]butanedioate

Type of Compound Code(s): AC4140

Molecular Formula: C₈H₁₅O₆PS₂

Molecular Weight: 302.309

Accurate Mass: 302.004767

Percentage Composition: C 31.78%; H 5.00%; O 31.75%; P 10.25%; S 21.21%

Physical Description: Cryst. (CHCl₃/hexane)

Melting Point: Mp 42-45°

>>Derivative: 2-Et ester

Synonym(s): α-Et ester. 2-Ethyl [(dimethoxyphosphinothioyl)thio]butanedioate

Type of Compound Code(s): AC4140

Molecular Formula: C₈H₁₅O₆PS₂

Molecular Weight: 302.309

Accurate Mass: 302.004767

Percentage Composition: C 31.78%; H 5.00%; O 31.75%; P 10.25%; S 21.21%

Physical Description: Cryst. (CHCl₃/hexane)

Melting Point: Mp 55-57°

>>Derivative: Di-Et ester

see Malathion, [GGT46-K](#)