



>>Entry Name: Phenylphosphinic acid, 9CI

Synonym(s): Benzenephosphinic acid

CAS Registry Number: 1779-48-2

PhPH(O)(OH)

Molecular Formula: C₆H₇O₂P

Molecular Weight: 142.094

Accurate Mass: 142.018367

Percentage Composition: C 50.72%; H 4.97%; O 22.52%; P 21.80%

Use/Importance: Used as aq. soln. for pptn. of rare earth elements and gravimetric detn. of Fe(III)

Physical Description: Cryst.

Melting Point: Mp 86-87°. Mp 78-80°

Solubility: Sol. H₂O

pKa Value: pK_{a1} 1.75 (25°) pK_{a1} 2.1 (40% MeOH aq.) pK_{a1} 8.71 (25°,DMF) pK_{a1} 10.87 (25°,Me₂CO)

Aldrich: P2880-8

>>Derivative: Cyclohexylammonium salt

Physical Description: Solid

Melting Point: Mp 198-200°

>>Derivative: Anilinium salt

Physical Description: Solid

Melting Point: Mp 101°

>>Derivative: Me ester

Synonym(s): Methyl phenylphosphinate

CAS Registry Number: 7162-15-4

Molecular Formula: C₇H₉O₂P

Molecular Weight: 156.121

Accurate Mass: 156.034017

Percentage Composition: C 53.85%; H 5.81%; O 20.50%; P 19.84%

Physical Description: Liq.

Boiling Point: Bp₃ 103-104°. Bp_{0.1} 72°

>>Derivative: Et ester

Synonym(s): Ethyl phenylphosphinate

CAS Registry Number: 2511-09-3

Molecular Formula: C₈H₁₁O₂P

Molecular Weight: 170.147

Accurate Mass: 170.049667

Percentage Composition: C 56.47%; H 6.52%; O 18.81%; P 18.20%

Source/Synthesis: Prod. of uv irradi. of Inezin

Physical Description: Liq.

Boiling Point: Bp_{0.2} 102-103°

Density: d₄²⁰ 1.13

Refractive Index: n_D²⁰ 1.5180 n_D²⁰ 1.5220

Hazard & Toxicity: LD₅₀ (mus, ipr) 625 mg/kg

Aldrich: 41564-2